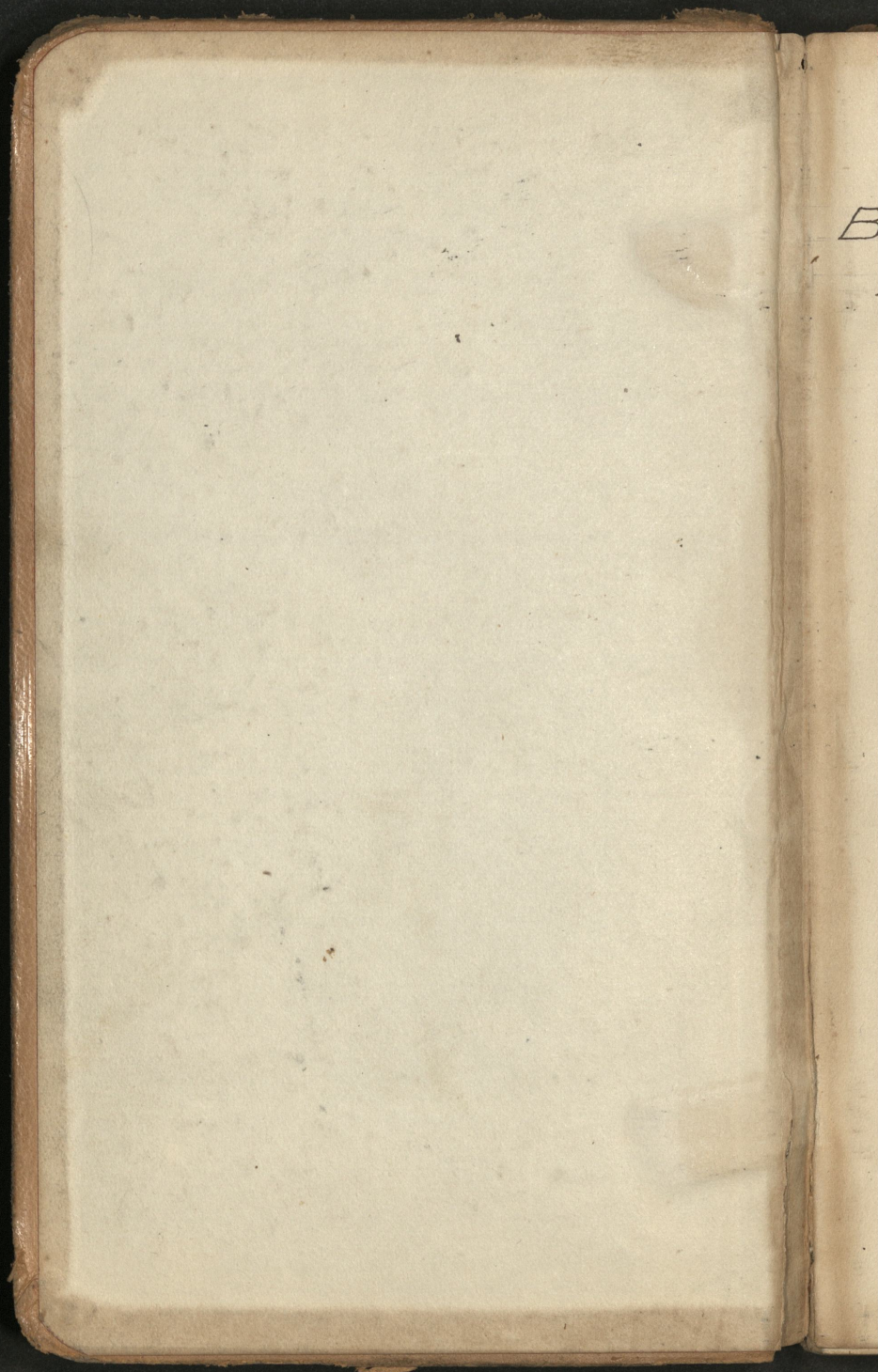


68-B8

LEVEL BOOK.

410.



BRADSHAW MOUNTAIN R.R.

—BIG BUG BRANCH—

Construction Notes

BOOK NO 4



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costs
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Preset
ted in

1/14/66

Contents

Pages 2 to 16	Track Chaining Notes
" 19 " 27	Pile Record ^{AND COST} of Bridges
" 29 " 38	BILL OF MATERIAL OF BRIDGES

Note:— When cost of bridges, in this book, were computed, no record of miscellaneous charges were made. Hence, at a later date, to agree with auditors figures, the costs in this book were found to be too small.

These corrections have been made & are on sheets, found in file box in the drafting room, marked "B. M. R. R. & Preset. & East. R. R. Bridges and Buildings"

Likewise under each bridge, listed in this ^{book}, are found following corrections to agree with above named sheets:

- 1 Total cost
- 2 Cost per: lin. ft.
- 3 " Carpenter per "N"
- 4 " per pile "

W. J. G. 1/1/06

Stations

1139+76 Track P&E R.R. = 0

2158

0 = 408+20² Loc. P.T. Center P&E Trac

4+50 Box Culvert 1x1.5-75

3+70 40

4+89⁶ = 403+30⁶ P.C.C. 10° L A. 73°26' ST 284.97

6+57 Head road S. Leg of Y

10+65 Box Culvert 1x1.5x36

11+65³ = 396+54² P.C. 10° L A. 67°34' ST 383.34

(393+37 Road

15+09² = (393+09 Head P.T.

15+15 Box Culvert 1x1.5x36.0

15+99⁷ P.S.C. 9x10 R. A. 70°30'

19+65 Box Culvert 3x5x89⁵

20+84⁵ P.C.C. 16° R A. 77°34' TS 418.49

21+00 Road Crossing

21+74⁵ = 386+72² P.S. 9x10 R A 70°30'

22+49 = 385+99⁵ P.T.

23+37 P.S.C. 8x11 L A 6°00'

29+04⁷ P.C.C. 13° L A 73°48' TS 453.32

29+92⁷ = 378+54 P.S. 8x11 L A° 6°00'

30+42⁵ So. end Cattle Guard

30+52⁵ No " " "

2 ✓



9 Mo.
37.

33.34

1845

53 32

Stations Equality

37+85⁴ 370+61 P.T.

41+75⁴ 366+71 P.C. 4° L A = 15° 36' T 196 22

41+71 Box Culvert 1 X 1.5 X 26.0

48+85 359+61 " " 1 X 2 X 24.0

52+80 M.P. No 1

54+36 So. end Cattle Guard

54+46 No. " " "

54+89 Road Crossing

55+57⁸ 352+88 P.T.

57+21⁴ So. end Bridge #1

57+81⁴ No. " " #1

63+63⁶ 344+82² P.C. 4° R A 32° 14' T 413 9

65+41 B.C. 2.0 X 2.5 X 40.0

67+47 " 2.0 X 3.5 X 56.0

73+49 Road Crossing

77+32 Double B. Culvert 2.0 X 5.5 X 38.0

77+46⁴ H. Block HENRIETTA Spur

22

9

147 from June

Stations

77+85⁵ 330+58⁴ P.T.

82+70⁹ 325+73 P.C. 8° R A 38° 50' T 252.46

84+56⁹ 323+87³ P.T.

90+22¹ 318+21 P.C. 8° L A 45° 18' T 298.80

92+28⁴ 316+14² P.T.

98+72¹ 309+71 P.C. 8° R A 51° 30' T 345.48

100+75 Box Culvert 2.0x2.5x34.0

100+94 307+47² P.T.

105+35² 303+06 P.C. 8° L A 35° 18' T 227.2

105+60 M.P. # 2

107+30⁴ 301+10⁵ P.T.

113+62 Box Culvert 2.0x3.0x42.0

115+76² 292+65 P.C. 4° R A 33° 50' T 435.67

119+91¹ 288+48² P.T.

125+50³ 282+89 P.C. 4° L A 22° 22' T 283.2

127+18 81+21² Road Crossing

141+24⁴ 267+12⁵ P.T.

142+04 264+00 Box Culvert 2.7x3.0x84.0

145+77² H. Black and Sidings

4

1677
1293

246

89

5.48

79

67

2

145779

205

213

Station

146+15

Box Culvert 20x2.5x37.0

146+66⁸ 261+70 P.C. 8° R 43° 24' A T=285⁰³

147+99 260+36⁷ P.T.

151+20⁷ 257+15 P.C. 6° L 19° 18' T=162³⁸

153+59

Box Culvert 10x2.5x26.0

155+09³

H.B. end of Sidings

155+99³ 252+35⁵ P.T.

156+89³

P.S.C. 9x10 R 7° 30'

158+40

M.P. #3

158+64

End Bridge #2 Bent #13

160+46

End Bridge #2 Bent #15

162+06⁸

P.C.C. 16° RA 82° 48' T=454⁵³

162+96⁸ 245+38 P.S. 9x10 R 7° 30'

163+53⁶ 244+81 P.T.

166+53⁶ 241+81 P.C. 4° L A 12° 00' T=150⁵⁵

169+60⁸ 238+73⁹ P.T.

172+78⁷ 235+56 P.C. 8° L A 25° 26' T=161⁶³

173+75 234+58⁸ P.T.

$$\begin{array}{r}
 155698 \\
 145779 \\
 \hline
 9314
 \end{array}$$

5

Eugenie ⁽¹⁵⁰⁻⁴⁸⁾ 931.4 kg 15 Cars
 No 285

Station

- 174+65 P.S.C. 9X10 R A 7°30'
- 176+34⁸ P.C.C. 16° R A 27°10'
- 177+24⁸ P.S. 9X10 R A 7°30'
- 179+61 Road Crossing
- 180+74² 227+59⁶ P.T.
- 181+64² P.S.C. 9X10 L A 7°30'
- 188+73 P.C.C. 16° L A 113°24'
- 189+63 218+70¹ P.S. 9X10 L A 7°30'
- 190+77⁵ { 217+83³ back
217+56⁴ fore P.T.
- 193+93¹ 214+68¹ P.C. 8° R 25°15' A
- 195+60⁴ 213+00⁸ P.T.
- 197+69¹ 210+92 P.C. 8° L A 16°42'
- 198+53⁵ 210+05⁴ P.T.
- 199+43⁵ P.S.C. 9X10 R A 7°30'
- 202+10 Box Culvert 2X2.5X810'
- 203+18⁵ P.C.C. 16° R 60°00'
- 204+08⁵ 204+50⁴ P.S. 9X10 R A 7°30'
- 204+55⁶ 204+03³ P.T.
- 205+59⁶ P.S.C. 8X13 L A 6°00'
- 210+42⁹ P.C.C. 11° L A 53°10'

T₃ =

T₃ =

T = 16

T = 1

T₃ =

T₃ =

$$T_s = 181 \underline{95}$$

$$T_s = 785 \underline{98}$$

$$T = 160 \underline{42}$$

$$T = 105 \underline{12}$$

$$T_s = 318 \underline{44}$$

$$T_s = 382 \underline{97}$$

Stations

211+20

M.P. # 4

211+46⁹ 197+12 P.S. 8X13 L A 6°00'

217+63⁶ 190+95⁴ P.T.

220+09 188+50 P.C. 8° R A 19°38'

221+65¹ 186+93⁵ P.T.

222+12

Cor. of ANNIE Mill 20' L

222+48

" " " " 25' L

224+00²

P.C.C. 4° L A 9°26'

226+52⁸ 182+06¹ P.C. 8° L A 20°09'

228+76² 179+82 P.T.

229+66²

P.S.C. 9X10 L A 7°30'

231+40²

P.C.C. 16° L A 29°51'

232+30² 176+28

P.S. 9X10 L 7°30'

232+34

Road Crossing

232+62

Box Culvert 10X2.5X20.0

233+22⁸ 175+35³

P.T.

233+83

Road Crossing

235+66¹ 172+92

P.C. 8° R A 19°28'

236+70¹ 171+88

P.T.

7

T. 123. 93

T. 110. 19

T. 127. 27

Ts 183. 26

T. 122. 86

Stations

237+34 ^{N^o 9 Fros} Point of Fros Red Rock Spur
 238+13 H. Block " " "

239+35¹ 169+23 P.C. 40° L A 10° 36' T=132.89

243+87⁸ 164+70³ P.T.

244+95⁸ P.S.C. 9X12 L A 7° 30'

247+45¹ P.C.C. 14° L A 34° 54'

248+53¹ 160+05 P.S. 9X12 L A 7° 30'

250+85³ 157+72⁸ P.T.

252+06³ P.S.C. 11X11 R 11° 0.0'

252+94² B.C. 2.5X2.5X 43.0'

257+68³ Bent #14 Bridge #3

Red Rock Spur

238+13 Main line = 0 Head Block

0+95⁵ H.B. siding on Left.3+75⁵ Cor. Depot 10.5 R

4+21 " " 10.0 R

4+42 H.B. siding Stub Switch No 6¹/₂ Frog

4+68 Road Xing

5+83 End of Spur

Depot 2 38/3

$$\begin{array}{r} 400 \\ 238/3 \\ \hline \end{array} = 443 \text{ miles}$$

$$T_3 = 245 \frac{30}{100}$$

$$\begin{array}{r} 442 \\ 955 \\ \hline 346 \end{array}$$

$$\begin{array}{r} 503 \\ 346 \\ \hline 929 \end{array}$$

Stations

- 259+49⁶ Bent #1 Bridge #3
- 261+59⁴ P.C.C. 18° R A 171° 33¹/₂'
- 262+40⁴ ^{146+172 Ford} _{146+142 Back} P.S. 9x9 R A 7° 30'
- 262+92¹ 145+62⁴ P.T.
- 263+82¹ P.S.C. 9x10 L A 7° 30'
- 264+00 M.P. #5
- 269+71⁵ P.C.C. 16° L A 94° 18'
- 270+61⁵ 137+93 P.S. 9x10 L A 7° 30'
- 271+97⁵ 136+57 P.T.
- 273+69¹ 134+84⁸ P.C. 9° R A 15° 30'
- 274+48⁵ ^{134+06 Ahead} _{133+69 Back} P.T.
- 275+38⁵ P.S.C. 9x10 L A 7° 30'
- 280+03 P.C.C. 16° L A 74° 19'
- 280+93 ^{127+245 Ahead} _{127+342 Back} P.S. 9x10 L A 7° 30'
- 281+44⁹ 126+82 P.T.
- 282+40⁹ ^R P.S.C. 8x12 A 6° 00'
- 285+73⁹ P.C.C. 12° R A 39° 57¹/₂'
- 293+46 114+80⁹ P.C. 9° R A 69° 29'
- 294+35 Road Crossing

9

 $T_0 =$
 $T'' =$
 $T_0 = 549.22$
 $T = 86.64$
 $T_0 = 397.18$
 $T_0 = 248.32 \quad T'' = 203.10$
 $T = 441.53$

Stations

295+41² 112+85 P.T.

296+31² P.S.C. 9X10 L A 7°30'

301+87 P.C.C. 16° L A 88°56'

302+59 105+67² P.S. 8X9 L A 6°00'

302+96⁸ 105+28² P.T.

303+77⁸ — P.S.C. 9X9 R 7°30'

305+54 107X99 Open Culvert 16'6"X13'2"X5'2" Deep

306+93⁶ East Portal Tunnel

309+14 West Portal Tunnel

309+66 P.C.C. 18° R A 105°52'

310+87 97+38 P.S. 11X11 R A 11°00'

312+08⁴ 96+16² P.T.

312+90 Box Culvert 4.7X5.0X110'0"

312+98⁴ P.S.C. 9X10 L A 7°30'

315+33⁵ P.C.C. 16° R A 37°31'

92+01⁶ Ford

316+23⁵ 91+97⁸ BACK P.S. 9X10 R A 7°30'

316+52 91+69⁵ P.T.

316+80 M.P.#6

317+42 P.S.C. 9X10 L 7°30'

$$T_3 = 449.83 \quad "T" = 408.1$$

$$T_3 = 424.7 \quad "T" = 391.07$$

(2) Br No 4

$$T_3 = 578.91 \quad "T" = 541.75$$

$$T_3 = 577.6 \quad "T" = 520.56$$

$$T_3 = 566.3$$

Station	
323+42 ⁵	P.C.C. 16° L A 96° 05'
324+32 ⁵ 83+89	P.S. 9x10 L A 7° 30'
324+77 ⁵	Point of Frog BLOCK Spur
328+02 ⁸ 80+18 ³	P.T.
328+58 ⁸	P.S.C. 7x8 L A 4° 40'
330+11 ¹	P.C.C. 16° L A 24° 22'
330+67 ¹ 77+54	P.S. 7x8 L A 4° 40'
330+78 ² 77+41 ⁵	P.T.
331+99 ²	P.S.C. 11x11 R A 11° 00'
332+40	{ Open Culvert 10.6 x 16.6 x 4.1 Deep
336+28	Road Crossing
338+35 ⁵	P.C.C. 18° R A 114° 25'
339+56 ⁵ 68+64	P.S. 11x11 R A 11° 00'
339+81 ² 68+35 ⁴	P.T.
340+71 ² 65+28 ⁶	P.S.C. 9x10 L A 7° 30'
342+88	P.C.C. 16° L A 34° 41'
343+78 64+38 ⁶	P.S. 9x10 L A 7° 30'
344+92 ³ 63+25 ⁵	P.T.
348+16 ³ 60+01	P.C. 6° L A 19° 28'

not in

$T_s = 135 \underline{49}$

? Br No 5

$T_s = 864 \underline{42}$

$T_s = 209 \underline{10}$

$T = 163 \underline{31}$

Stations

350+17⁵ 57+99 P.T.

353+90⁵ 54+20⁵

351+13⁵

P.S.C. 8X12 L 6°00'

354+53⁵

P.C.C 12° L A 40°48'

355+49⁵ 52+67

P.S 8X12 L A 6°00'

359+77⁴ 48+39 P.T.

362+57⁴ 45+59 P.C. 4° L A 11°12'

362+82⁹

Bent #11 Bridge # 6

364+04⁴ 44+10² P.T.

364+22⁹

Bent #1 Bridge # 6

365+12⁴

P.S.C. 9X12 R A 7°30'

367+08⁵

P.C.C. 14° R A 27°28'

368+16⁵ 39+98⁵ P.S. 9X12 R A 7°30'

369+60

M.P. #7

371+48⁸ 36+65² P.T.

374+42² 33+72 P.C. 6° R A 17°38'

375+39³ 32+75 P.T.

376+81⁸

Road Crossing

377+89³ 30+25 P.C. 6° L A 15°00'

$$T_s = 283 \underline{28}$$

$$T = 140 \underline{45}$$

$$T_s = 213 \underline{31}$$

$$T = 148 \underline{12}$$

$$T = 127 \underline{84}$$

Station

378+60⁸ { 29+58⁴ For'd
29+52² Back P.T.

379+44⁸ P.S.C. 7X12 R A 40°40'

382+33² P.C.C. 10° R A 28°56'

383+17² 24+96⁵ P.S. 7X12 R A 40°40'

383+57² 24+54³ P.T.

384+47² P.S.C. 9X10 L A 70°30'

387+75¹ P.C.C. 16° L A 52°28'

388+65¹ 19+46⁴ { P.S. 9X10 L A 70°30'
Box Culvert 2.0X2.5X41.5'

388+80⁸ 19+30¹ P.T.

389+70⁸ P.S.C. 9X10 R A 70°30'

391+48⁵ P.C.C. 16° R A 28°26'

392+38⁵ 15+73 P.S. 9X10 R A 70°30'

393+30 14+81⁵ P.T.

394+91⁵ " Bent #9 Bridge # 7

395+32⁵ 12+79 P.C. 8° L A 16°12'

396+03⁵ Bent #1 Bridge # 7

$$T_s = 235 \underline{67}$$

$$T_s = 285 \underline{53}$$

$$T_s = 185 \underline{87}$$

$$T = 114 \underline{42}$$

396+70.3 { 11+36' Back } P.T.
 { 11+41' Ford }

399+198 8+866 P.C. 7°R 17°28' T 125.74

399+29 Road Xing

401+353 POINT FROG Mill Spur.

401+88 Road Xing

402+145 Head Rod Mill Spur

402+295 Road Xing

402+532 Center of Turntable 43' R.

403+998 POINT FROG Turntable Spur.

404+275 3+793 P.T. 8°L

404+798 Head Rod Turntable Spur.

405+60 End Bridge #8

405+963 2+11 P.C. 8°L 13°30' T 84.78

406+135 End Bridge #8

406+775 POINT of FROG #6' V

407+35' Head Rod Side Track on Spur.

408+577 Head Rod Poland Spur. No 9 Frog.

409+22 0-1+15 P.T.

409+83 Road Xing

410+47 0-2+40 P.C. 16°R ^V A 20° T 63.15

411+05 END

411+50 END

4 Fu

14

5.74

$$\begin{array}{r} 8577 \\ 735 \\ \hline 142 \end{array}$$

$$\begin{array}{r} 40857 \\ 554 \\ \hline 403037 \end{array} = 7.63 \checkmark$$

$$\begin{array}{r} 41105 \\ 554 \\ \hline 40551 \end{array} = 7.68 \text{ Ireland}$$

3.15

$$4 \text{ Funchal } 4.5 \text{ by Suro } = 7.71 \text{ m} = 7.8$$

Mill Spur - Poland

402+145 Main Line = 0 Head Rod

1+797 = 1+462 P.T. 15° C.L.

1+80 End of Bridge #9

2+18 = 1+85 P.C. 8° R A 9° 30'

2+50 End Bridge #9

3+348 = 3+018 P.T.

4+70 S.W. Cor Mill 7.0 Left.

5+10 Mill 7.0 L - End of Spur

Poland Spur

408+572 Main Line = 0

0+844 = 0+60 P.T.

1+754 = 1+50 P.C. 16° R A 19° 12'

2+944 = 2+70 P.T.

4+96 = Cor of Platform 5.0 L Platform 8' x 28'

4+98 = 4+736 P.C. 8° R A 6° 0'

5+24 Cor. Platform 5.0 L - Corner Main Platform 6.7 L

5+36 S.E. Corner Poland Depot 12.5 L

5+72 N.E. , , , 12.5 L

5+78 = 5+486 P.T.

mill spur

510

T.T.

200?

main sp

820

sidg. or spur

447

2077 $\frac{6}{10}$

589

142

447

768 ms.

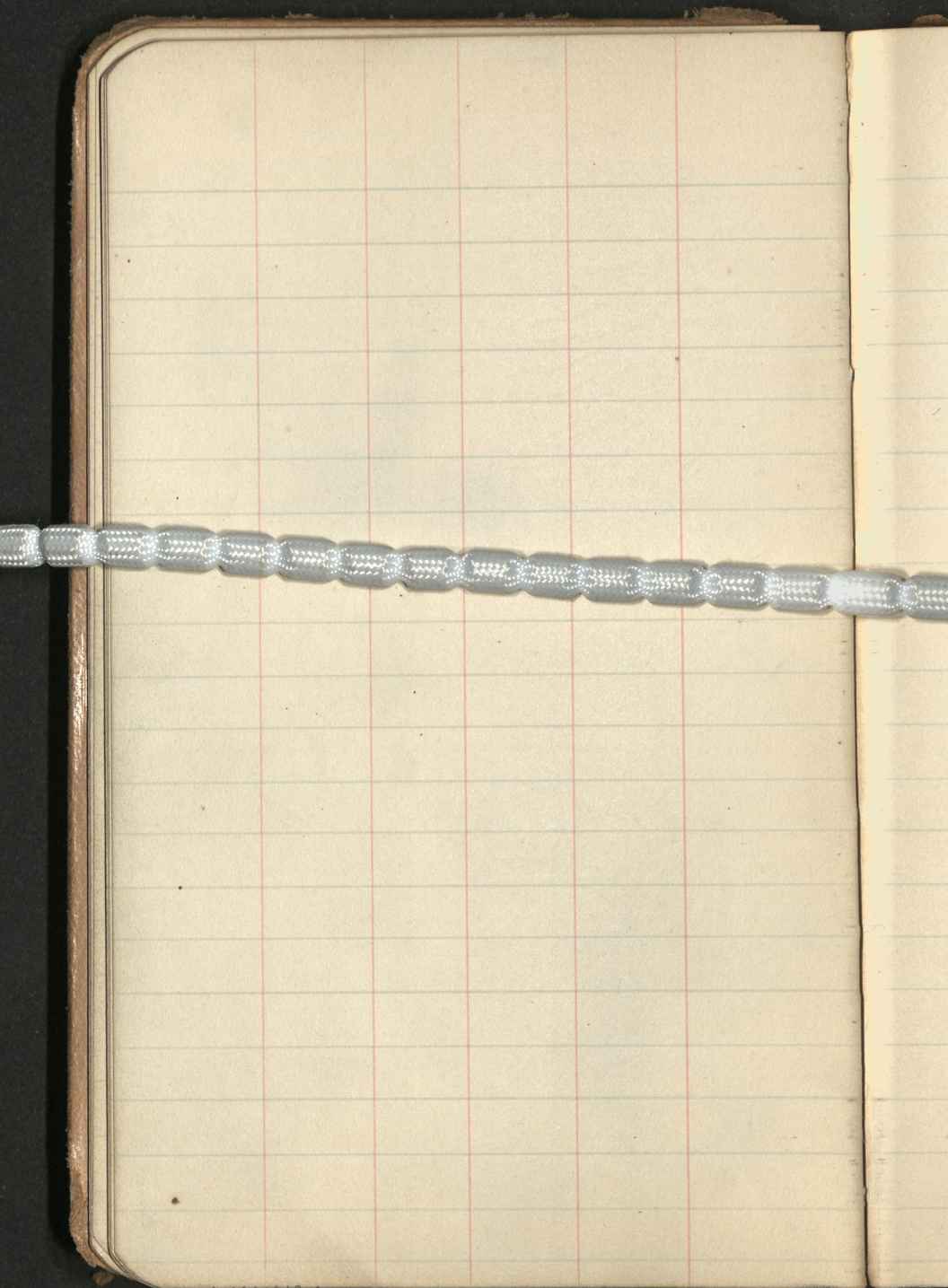
Poland Spur.

5789 Heat Rod End of Siding

6+12 Corner Main Platform T.O.L

8+20 End

16



17









18



Bridge No 1
60' Pile

Height - 11'
Length - 60'

No of Bent	Location Station	Center Height of Bent
1	57+81.4 350+65.5	
2	+80	5.2
3	+95	11.0
4	351+10	7.3
5	57+21.4 +24.5	

†
FOR BILL OF MATERIAL, SEE PAGE 29

FIGURES IN RED, NEW STATION NUMBERING

Mile 1.08 from Poland Jct.

COST - BRIDGE No. 1.

19

PILING:

348 LINFT. OP @ 0.286 = 99.53

99.53

TIMBER:

6972 BD.FT. O.P @ \$25.20 = 175.70

384 " " N.P @ \$25.20 = 9.66

185.36

282.89

IRON:

28 BOLTS $\frac{5}{8} \times 33$ @ 0.1675 = 4.68

26 " $\frac{3}{4} \times 29$ @ 0.16 4.16

24 " $\frac{3}{4} \times 18$ @ 0.16 3.84

18 " $\frac{7}{8} \times 20$ @ 0.16 2.88

10 # " $\frac{3}{8} \times 8$ @ ^{per #} 0.37 = 0.37

160 WASHERS @ 0.044 = 7.04

52 SPOOLS @ 0.083 = 4.32

10 # - 60⁰ NAILS @ 0.37 = 0.37

27.66

cost per lin ft. 10.01
" carp. per lin ft. 9.72
" per pile 3.70

MATERIAL

312.55

LABOR^{x.}

230.00

~~159.21~~

TOTAL

\$ 471.76

600.64

+ DIVIDED AS FOLLOWS:

CARPENTER \$ 63.58
PILE DRIVING 66.70
TEAMING 28.93

\$ 159.21

CR.

Note - See note on Page 1

Bridge⁺ N^o 2 182' Pile and Trestle

13 ^{14' over} ~~hands~~
Height - 35'
Length - 182'

No. of Pile	Location Station	Center Height of Pile	Length of Plum Post	Piles depth in Ground				
				1	2	3	4	
1	160+46 247+88				21.0	18.0	21.0	Av. 20'
2	248+0.5	8.0		14.3	15.0	13.0	15.2	14.5
3	+15.5	18.0	13.0	2.0	4.0	5.5	5.0	6.0
4	+29.5	28.2	22	2.7	3.2	2.8	2.8	6.7
5	+43.5	28.3	24		3.0	3.0	5.0	8.5
6	+57.5	30.5	26	4.3	4.0	3.0	3.5	7.8
7	+71.5	33.4	24	7.5	8.0	7.2	6.5	10.6
8	+85.5	32.6	24	5.0	7.0	4.0	6.0	9.2
9	+99.5	35.5	24	3.2	4.0	4.0	3.0	7.6
10	249+13.5	32.8	28' 9" L 31' 6" R				1	30.14
11	+27.5	25.2	21' 4"					
12	+41.5	18.7	14' 9"					
13	+55.5	12.2	9'					
14	158+64 +69							

ON 5/1/15

+
FOR BILL OF MATERIAL - SEE PAGES 30, 31

FIGURES IN RED - NEW STATION NUMBERING -

Mile 3.01 Over Eugenie Gulch.

20

COST - BRIDGE #2

PIILING:

558 LIN. FT. O.P. @ 0.286 = 159.59 159.59

TIMBER:

3336 BD. FT. R.W. @ \$27.50 = 91.74

960 " " " 2nd \$20.00 = 19.20

288 " " N.P. TREATED, \$12.80 = 3.69

2744 " " O.P. NEW, \$25.20 = 69.15

37698 " " " 2nd, \$20.00 = 753.96

330 " " N.P. NEW, \$12.80 = 4.22

941.96

1101.55

IRON:

80 BOLTS, $\frac{3}{4}$ x 30 2nd, 0.16 1/2 = 13.20

84 " $\frac{5}{8}$ x 33, " 0.157 1/2 = 13.20

30 " $\frac{3}{4}$ x 21 " 0.10 = 3.00

190 " $\frac{3}{4}$ x 18 " 0.1375 = 26.12

90 " $\frac{3}{4}$ x 20 " 0.16 = 14.40

700 WASHERS " 0.04 = 28.00

144 SPOOLS " 0.083 = 11.95

52 DOWELS " 0.04 = 2.08

50⁺ SPIKES $\frac{3}{8}$ x 8 " 0.037 = 1.85

60⁺ - 60^d NAILS 0.022 = 1.32

100⁺ SPIKES 0.037 = 3.70

118.82

lost per lin ft. \$12.95
" Carp. per " 7.60
" per pile 4.10

MATERIAL

1220.37

LABOR⁺

+ 930.20

1188.2

Note - See note of Page 1

+ DIVIDED AS FOLLOWS:

TOTAL

\$ 1889.19

CARPENTER
PILE DRIVING
TEAMING

\$ 356.49
140.58 } o.k.
171.75
\$ 668.82

\$2356.36

Bridge No 3
182' Pile and Trestle

13 pails
14' each

No of Bent	Station	Center Height of Bent	Length of Plum Post		Depth of Piles in Ground					
			Upper Deck	Lower Deck	1	2	3	4	5	6
1	259+49.6 149+07.5				10.2		13.0		14.5	
2	+21	8.0			10.5	11.2	12.6	12.6		
3	+35	17.0	11.0		3.7	5.1	6.0	6.3		
4	+49	23.0	17.0		3.4	4.0	3.6	3.0		
5	+63	28.4	23.0		4.0	5.9	4.9	5.2		
6	+77	35.0	27.0		3.3	5.3	10.0	4.4	8.3	10.1
7	+91	43.8	23.0	13.0	4.0	3.8	4.6	3.3	5.0	6.7
8	150+05	53.2	23.0	19.0	5.7	5.0	7.0	7.3	7.0	7.0
9	+19	50.5	23.0	19.0	4.8	4.0	4.3	4.3	3.8	4.7
10	+33	40.0	23.0	11.0	4.9	4.3	5.0	4.0	4.2	4.7
11	+47	30.5	28.0		7.0		7.0	8.0	9.0	
12	+61	19.0	15'-8"		12.9	12.0	12.0	13.6		
13	+75	11.5	8.0		16.4	17.4	17.2	15.0		
14	257+68.3 +88.5				18.0	16.0	18.0			

* FOR BILL OF MATERIAL, SEE PAGE 32

FIGURES IN RED - NEW STATION NUMBERING

Mile 4.88

Height 53.2'

Length 182'

COST - BRIDGE NO. 3

21

PILING:

1094 LIN. FT. O.P. NEW @ .286 = 312.88 312.88

TIMBER:

3992 BD. FT. O.P. NEW @ .2520 = 100.60

43952 " " " " 2nd @ .20.00 = 879.04

304 " " N.P. @ 12.80 = 3.89

5256 " " R.W. @ 27.50 = 144.54

144 " " TREATED PINE @ 15.30 = 2.20

1130.27

1443.15

IRON:

76 BOLTS 7/8 x 20 NEW @

68 " 3/4 x 21 " " }

84 " 5/8 x 33 " " }

80 " 3/4 x 30 " " }

250 " 3/4 x 18 " " }

83.70

60# SPIKES 3/8 x 8 " .032 1.92

74 DOWELS " N.C.

168 SPOOLS " .083 13.94

1110 WASHERS " .04 44.40

100# 60 NAILS " .032 3.20

80 BOLTS 3/4 x 21 2nd " }

13 " 3/4 x 24 " " }

250# SPIKES " .032 8.00

cost per lin. ft. \$17.74
" carp. per lin. ft. 13.25
" per pile 6.22

Note See note on Page 1

MATERIAL

\$ 1612.26

LABOR

1377.00
1085.34

Total

\$ 2697.60

* DIVIDED AS FOLLOWS:

CARPENTER

\$513.09

PILE DRIVING

273.70

TEAMING

298.55

\$ 1085.34

3238.93

OK.

Bridge^{*} No 4

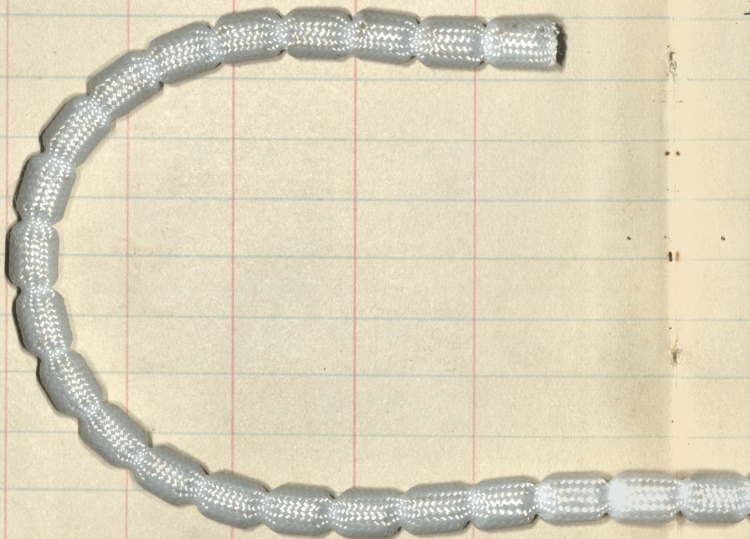
14.6' Bulkhead Trestle

Height 5'
Length 14.6'

Mile

STA. 102+71
305+54

71



* FOR BILL OF MATERIAL, SEE PAGE 33

RED FIGURE — NEW STATION NUMBERING

Mile 5.78

22

COST. - BRIDGE NO. 4.

TIMBER: 1

1248	B.D. FT. N.P.	@	\$ 12.80 =	15.97	
480	" " " 2 ^m	@	6.50 =	3.12	
128	" " " NEW	@	12.80 =	1.64	
1552	" " O.P. 2 ^m	@	20.00 =	31.04	
288	" " R.W. " "		27.50 =	7.92	59.69

IRON: 10

10	BOLTS $\frac{3}{4}$ x 18	@	0.130 =	1.30	
8	" $\frac{3}{4}$ x 30	"	0.160 =	1.28	
10	" $\frac{5}{8}$ x 33	"	0.1575 =	1.58	
36	WASHERS	"	0.04 =	1.44	
20	SPOOLS	"	0.083 =	1.66	
10	# 40 NAILS	"	0.033 =	0.33	
10	- 8" B. SPIKES	"	0.035 =	0.35	7.94

MATERIAL

CARPENTER LABOR

lost per lin ft. \$9.52
 " carp. per "M" 9.60
 " per pile

TOTAL \$ ~~102.89~~
 142.88

Note - See note on Page 1

o PICKED UP AT TUNNEL

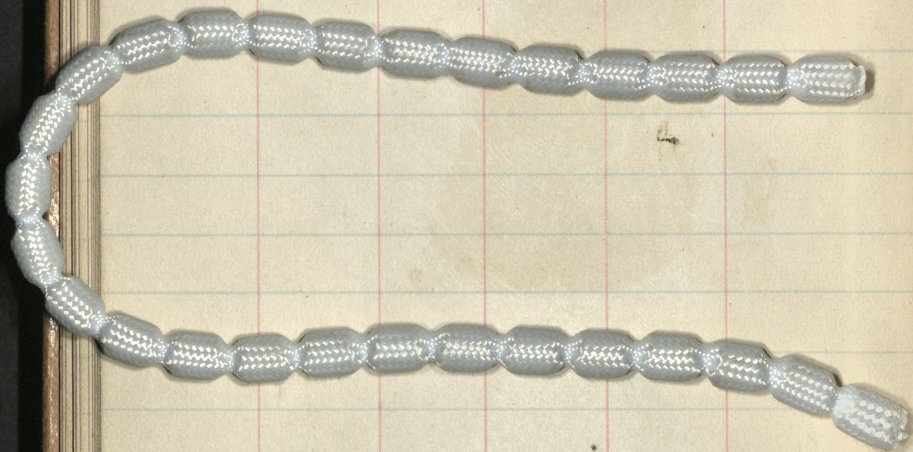
Bridge⁺ No 5
14.6' Bulkhead Trestle

Height 4'
Length 14.6'

Mile

STA. 75+80

332+40



* FOR BILL OF MATERIAL - SEE PAGE 34
RED FIGURE - NEW STATION NUMBERING.

Mile 6.29

23

COST. - BRIDGE NO. 5.

TIMBER:

432 ⁰ BDFT R.W	@	\$ 27.50 =	11.88 ✓
288 " " "	2 nd "	\$ 20.00 =	5.76 ✓
384 ⁰ " " N.P	"	12.80 =	4.92 ✓
560 " " " NEW	"	12.80 =	7.17 ✓
480 ⁰ " " O.P	"	25.20 =	12.09 ✓
1822 " " "	2 nd "	20.00 =	36.44 ✓
40 ⁰ OLD TIES	"	NO. COUNT.	=

\$ 78.26

IRON:

10 BOLTS $\frac{3}{4} \times 18$	2 nd @	0.130 =	1.30
8 " $\frac{3}{4} \times 30$	" "	0.160 =	1.28
10 " $\frac{5}{8} \times 33$	" "	0.155 =	1.55
# 10 B. SPIKES	"	0.03 $\frac{1}{2}$ =	.35
# 20 - 60 ^d NAILS	"	0.03 $\frac{3}{4}$ =	.67
36 - WASHERS	"	0.04 =	1.44
20 - SPOOLS	"	0.083 =	1.66

\$ 8.26

Cost per lin ft. #10.34
" Carp. per "ly" 8.40

MATERIAL

\$ 86.51

CARPENTER LABOR.

\$ 33.75 O.K.

Note - See note on Page 1

TOTAL \$ 140.26
✓ 164.32

° PICKED UP AT TUNNEL

Bridge^x No 6 140' Pile and Trestle

Mile

No. of Bent	Location Station	Center Height	Length of Pile in Ground	L to R				
				Pump Post	1	2	3	4
1	364+22.9 43+94.5				16.7	20.0	22.0	19.5
2	44+08	7.5			18.5	19.6	19.9	18.8
3	+22	18.0	12.0	10.0	11.3	12.8	13.4	11.9
4	+36	25.4	21.0	7.0	5.8	4.8	4.7	5.6
5	+50	27.1	22.0	4.6	4.8	3.3	4.1	4.7
6	+64	28.5	23.0	5.0	4.5	4.0	4.5	4.5
7	+78	32.9	23.0	5.0	4.3	4.4	6.0	5.0
8	+92	28.3	23.0	5.6	5.9	5.5	5.6	5.6
9	45+06	17.4	13.0	8.1	8.9	10.8	12.8	10.1
10	+20	7.5			10.3	9.7	9.5	12.5
11	362+82.9 +33.5				7.3	9.0	12.1	9.4



^x FOR BILL OF MATERIAL, SEE PAGE 35

RED FIGURES INDICATE NEW STATION NUMBERING

Mile 6.87

Height 32.9'
Length 140'

24

COST.

BRIDGE NO. 6

PILING:

172 LIN. FT. O.P. 2^m @ 0.10 = 17.20

456 " " " NEW " 0.286 = 130.41

147.61

TIMBER:

1920 BD. FT. TREATED PINE @ 15.30 = 29.38

341 " " N.P. 12.80 = 4.36

576 " " R.W. @ 27.50 = 15.84

29143 " " O.P. 2^m " 20.00 = 582.86

632.44

780.05

IRON:

160 BOLTS $\frac{3}{4} \times 18$ " 2^m @ 0.15 = 48.90

36 " $\frac{3}{4} \times 21$ " NEW @ 0.15 = 5.40

66 " $\frac{5}{8} \times 33$ " 2^m " 0.15 = 6.30

64 " $\frac{3}{4} \times 30$ " " 0.15 = 6.20

36 " $\frac{7}{8} \times 30$ NEW " 0.15 = 5.40

42 " $\frac{3}{4} \times 18$ 2^m " 0.15 = 6.30

200 # SPIKES 2^m " 0.031 = 6.20

50 # " " " 0.032 = 1.60

50 # 60d NAILS " 0.037 = 1.85

500 WASHERS. 2^m " 0.04 = 20.00

128 SPOOLS " 0.083 = 10.62

42 DOWELS " 0.00 no count

\$ 100.87

(cost per lin Ft. \$12.07

" carp. per "M" 7.12

" per pile 5.77

MATERIAL

LABOR X

TOTAL \$1690.10

X DIVIDED AS FOLLOWS:

CARPENTER 227.70
PILE DRIVING 162.87
TEAMING 98.81
\$489.38

O.K.

Note - See note on Page 1

Bridge[†] No 7
112' Trestle

Height 20.3'
Length 112'

Mile

No of Sext	Loc Station	Center Height	Length of Plum Post
	396+03 ⁵		
1	12+08 ⁵		
2	+22	10.5	7'-0"
3	+36	17.0	13'-6"
4	+50	19.7	16'-2"
5	+64	19.7	16'-3"
6	+78	20.3	16'-0"
7	+92	20.1	17'-2"
8	13+06	12.0	8'-3"
	394+91 ⁵		
9	13+19 ⁵		

† FOR BILL OF MATERIAL, SEE PAGE 36

RED FIGURES INDICATE NEW STATION NUMBERING.

Mile 7.48

25

COST. BRIDGE NO. 7.

TIMBER:

17862 BDFT. O.P. 2nd @ \$20.00 = 357.24

1051 " " N.P. TREATED @ \$15.30 = 16.08

2496 " " @ \$12.80 = 31.97

2304 " " R.W. 2nd @ \$20.00 = 46.08

\$ 451.37

IRON:

58 BOLTS $\frac{3}{4} \times 18$ "

12 " $\frac{3}{4} \times 21$ "

56 " $\frac{5}{8} \times 33$ "

54 " $\frac{3}{4} \times 30$ "

28 " $\frac{3}{4} \times 20$ "

@ } 0.167 = 34.72

28 DOWELS

" 0.04 = 1.12

112 SPOOLS

" 0.083 = 9.30

360 WASHERS

" 0.04 = 14.40

60 #60^d. NAILS

" 0.037 = 2.22

\$ 61.76

Cost per lin. ft. #8.26
" Corp. Per "Nj" 7.74

MATERIAL \$ 513.13

LABOR \$ 332.64
\$ 209.11

Note - See note on Page 1

TOTAL \$ ~~722.24~~
\$ 935.36

DIVIDED AS FOLLOWS:
CARPENTER
TEAMING

\$ 182.52
26.59 } O.K.
\$ 209.11

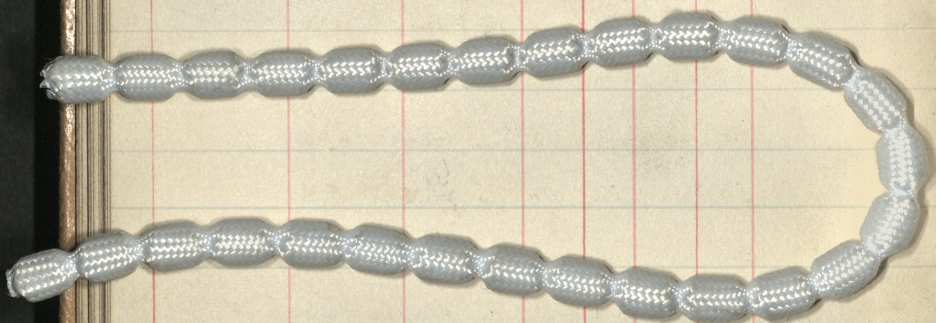
PICKED UP AT TUNNEL

Bridge^x No 8
53' Pile

Height 5'
Length 53'

Mile

No of Bent	Loc Station	Center Height	Piles in Ground				
			L	to R			
			1	2	3	4	
1	406+13 ⁵ 1+94		7.8	7.0	8.0		7.6
2	2+06	4.2 Skew 40°	3.0	5.0	3.0	2.5	3.4
3	+20	5.0 " 40°	4.5	4.6	5.3	5.5	5.0 ⁵
4	+34	5.0 " 40°	3.0	3.7	4.3	3.8	3.7
5	405+60 +46		5.0	6.0	6.0		5.7



* FOR BILL OF MATERIAL, SEE PAGE 37

RED FIGURES INDICATE NEW STATION NUMBERING.

Mile 7.68

26

COST - BRIDGE NO. 8.

PILING:

160 LIN. FT. O.P. 2nd @ 0.10^C = 16.00

19 " " O.P. NEW " 0.28^C = 5.43

\$ 21.43

TIMBER:

576 BD. FT. N.P. @ \$12.80 = 7.37

68 " " " NEW @ 12.80 = 0.87

6156 " " O.P. 2nd " 20.00 = 123.12

\$ 131.36

152.79

IRON:

24 BOLTS $\frac{3}{4}$ x 30 " 2nd @ 0.15 =

32 " $\frac{5}{8}$ x 33 " " " 0.15 = 11.10

18 " $\frac{7}{8}$ x 20 " NEW " 0.15 =

114 WASHERS. 2nd " 0.04 = 4.56

64 SPOOLS " " 0.083 = 5.31

20[#] - 60^{CL} NAILS, NEW " 0.037 = 0.64

\$ 21.61

Cost per lin. Ft. \$ 8.29
" tarp. per "M" 7.09
" per pile 4.39

MATERIAL \$ 174.40
LABOR + \$ 222.10
\$ 470.33

Note - See note on Page 1

Total \$ 344.73
\$ 439.61

+ DIVIDED AS FOLLOWS: \$
CARPENTER 48.25
PILE DRIVING 52.64
TEAMING 69.44
\$ 170.33

OK.

TAKEN FROM TUNNEL

Bridge* No 9
70' Pile
on Mill Spur

Height 9'
Length 70'

Mile

Pile No	Loc. Station	Center Height	Piles in Ground			
			L	T	R	4
1	1+47.5		100	90	100	
2	+61	7.0	4.3	4.3	3.8	6.5
3	+75	9.0	5.0	3.2	3.5	6.0
4	+89	8.0	5.2	4.3	3.5	3.8
5	2+03	4.7	7.8	6.0	3.2	3.8
6	+165		7.0	5.2	7.2	

PIL

TIM

Z

105

"

"

for

Mile 7.57

27

COST. BRIDGE NO. 9.

PILING:

256 LIN. FT. O.P. 2nd @ 0.10 = 25.60 \$ 25.60

TIMBER:

7813 BD. FT. O.P. 2nd @ \$2.00 = 156.26

148 " " N.P. " 12.80 = 1.88

960 " " O.P. " 25.20 = 24.19

\$ 182.33

207.93

IRON:

30 BOLTS. $\frac{3}{4}$ x 30 " 2nd @ }
34 " $\frac{5}{8}$ x 33 " " " }
26 " $\frac{3}{4}$ x 18 " " " } 0.15 = 14.48
4 " $\frac{3}{4}$ x 21 " " " }
22 " $\frac{7}{8}$ x 20 " NEW " 0.10 =

20 # - 60ST NAILS " " 0.037 = 0.64

192 - WASHERS 2nd " 0.04 = 7.68

68 - SPOOLS " " 0.083 = 5.64

\$ 28.44

Cost per lin. Ft. \$ 7.64
" carp per "M" 7.51
" per pile 3.59

MATERIAL = \$ 236.37

LABOR = \$ 257.68

Total = \$ 535.31

\$ 187.11

+ DIVIDED AS FOLLOWS:

CARPENTER, 59.21
PILE DRIVING, 57.45
TEAMING, 65.68

\$ 182.34

OK.

Note - See note on Page 1

TAKEN FROM TUNNEL.

Location
Loc. #
Kinds

Bridge No. —

No. of trees

size

length

depth
ground

material
last
blow



BRIDGES.BIG BUG BRANCHBRADSHAW MOUNTAIN RAILROAD.BILL OF MATERIAL.BRIDGE NO. 1

PILING: O.P. 348 LINEAL FEET.

TIMBER:

✓ 12 PCS.	7x16 - 30	O.P.	3360	FT. B.M.
8 "	6x8 - 16'	"	512	" "
✓ 2 "	3x10 - 32'	"	160	" "
✓ 2 "	3x10 - 20'	"	100	" "
8 "	6x6 - 16'	"	384	" "
✓ 41 "	6x8 - 9'	"	1476	" "
5 "	12x14 - 14	"	980	" "
8 "	3x12 - 16	N.P.	384	" "
			<u>7356</u>	<u>" "</u>

IRON:

✓ 28 BOLTS	$\frac{5}{8}$ - 33" (FROM OUTFIT CAR)	87 #
✓ 26 "	$\frac{3}{4}$ - 29"	106 #
✓ 24 "	$\frac{3}{4}$ - 18"	65
✓ 160 WASHERS	$\frac{3}{4}$ " - 4"	240 ✓
✓ 52 SPOOLS.		260

CARRIED FORWARD. 758

Mile 1.08

29

^x
BRIDGE NO. 1 (CONT'D)

IRON (CONT'D)

758 #

18 BOLTS. $\frac{7}{8} \times 20''$

68

10 # 60d. NAILS.

19

10 # $\frac{3}{8} \times 8$ BOAT SPIKES.

10

84.6 #

*See pages 19 find
for other data.*

* FOR LENGTH, COST, AND OTHER DATA, SEE PAGE 19

BRIDGE NO. 2
BILL OF MATERIAL.

PILING: O.P. 558 LINEAL FEET.

PIL

TIMBER:

FT. BM.

TIM

2	PCS.	12 x 12 x 22'	R.V. NEW.	528
3	"	12 x 12 x 24'	" "	864
4	"	12 x 12 x 26'	" "	1248
1	"	12 x 12 x 28'	" "	336
1	"	12 x 12 x 30'	" "	360
				<u>3336</u>
40	"	6 x 12 x 4'	" (FROM OLD LINE)	960
4	"	4 x 12 x 18'	N.P. NEW, TREATED.	288
14	"	12 x 14 x 14'	O.P. "	<u>2744</u>
2	"	12 x 12 x 10'	O.P. SH. (FROM OLD LINE)	240
4	"	12 x 12 x 14'	" " " " "	672
5	"	12 x 12 x 20'	" " " " "	1200
2	"	12 x 12 x 22'	" " " " "	528
7	"	12 x 12 x 24'	" " " " "	2016
3	"	12 x 12 x 26'	" " " " "	936
7	"	12 x 12 x 28'	" " " " "	2352
12	"	12 x 12 x 30'	" " " " "	4320
2	"	12 x 12 x 34'	" " " " "	816
CARRIED FORWARD				<u>13080</u>

Mile 3.01

Over Eugenie Gulch.

30

TIMBER:

BROT. FORWARD

13 080

	2	PCS.	3x10-14	OP. S.H. (FROM OLD LINE)	70
	2	"	3x10-18	" " " " "	90
BM.	6	"	3x10-20	" " " " "	300
528	8	"	3x10-22	" " " " "	440
864	9	"	3x10-24	" " " " "	540
48	11	"	3x10-26	" " " " "	715
336	13	"	3x10-28	" " " " "	910
360	3	"	3x10-30	" " " " "	225
36	39	"	7x16-30	" " " " "	10920
460	130	"	6x8-9	" " " " "	4680
288	70	"	6x8-16	" " " " "	4480
44	26	"	6x6-16	" " " " "	1248
240	6	"	2x12-16	N.P. NEW	37698 192
72	2	"	3x12-16	" "	96
00	4	"	2x4-16	" "	42
528					330

016

736

52

IRON:

#

20

80 BOLTS 3/4-30" S.H. (FROM OLD LINE) 336

16

84 " 7/8-33" " " " " 260

80

CARRIED FORWARD 396

BR

BR. No. 2 (CONT)

BRID

IRON: (CONT)

590

30 BOLTS. $\frac{3}{4} \times 21$ " SH. (FRONT OLD LINE) 102

PIL

190 " $\frac{3}{4} \times 18$ " " " " " 50390 D. " $\frac{3}{4} \times 20$ " " " " 291

TIM

700 WASHERS $\frac{3}{4}$ " " " " 1050

144 SPOOLS 4" " " " } CAST IRON 720

50 B. SPIKES $\frac{3}{8} \times 8$ 5052 DOWELS 1×8 6060[#] 60^d NAILS. NEW 60100[#] B. SPIKES $\frac{1}{2} \times 10$ " " 100

3533

+

FOR LENGTH, COST, AND OTHER DATA, SEE PAGE 20

590

102

503

292

1050

720

50

60

60

100

533

20

BR

BRIDGE NO. 3.
BILL OF MATERIAL.

BRID

PILING: O.P. (NEW) 1094 LIN. FT.

PILN

TIMBER:

FT. B.M.

TIM

14 PCS 12x14-14' O.P.

2744

39 " 7x16-30' (SH.)

10920

26 " 6x6-16' O.P. NEW.

1248

1371 LIN. FT. 12x12 " SH

16452

100 PCS 6x8-16' " "

6400

130 " 6x8-9' " "

4680

2200 LIN. FT. 3x10' " "

5500

33032

3 PCS 3x12-16' N.P.

144

4 " 2x12-16' "

128

3 " 2x4-16' "

32

304

2 PCS 12x12-16' REDWOOD

384

3 " 12x12x18' "

648

4 " 12x12-20' "

960

1 " 12x12-22' "

264

1 " 12x12-24' "

288

CARRIED FORWARD.

2544

+ F

Mile 4.88

32

BRIDGE^{*} NO. 3 (CONT'D)

FT. B.M.
2544

TIMBER: BROT. FORWARD

7 PCS. 12 x 12 - 28' REDWOOD 2352

1 " 12 x 12 - 30' " 360
5256

B.M.

744 2 " 4 x 12 - 18 TREATED PINE 144

920

248 IRON:

452 76 D. BOLTS $\frac{7}{8}$ - 20" NEW 289[#]

400 80 " " $\frac{3}{4}$ - 21" S.H. 264

680 68 " " $\frac{3}{4}$ - 21" NEW 207

500 13 " " $\frac{3}{4}$ - 24" S.H. 47

32 80 " " $\frac{3}{4}$ - 30" NEW 336

144 84 " " $\frac{5}{8}$ - 33" " 260

28 250 " " $\frac{3}{4}$ - 18" " 662

32 60[#] B. SPIKES $\frac{3}{8}$ - 8 " 60

04 250[#] " " OLD 250

84 74 DOWELS 1" x 8 NEW 84

48 168 SPOOLS 4" " 840

760 1110 WASHERS $\frac{3}{4}$ - 4" " 1665

64 100[#] 60^D NAILS " 100

5064

88

44

* FOR LENGTH, COST AND OTHER DATA, SEE PAGE 21

BR

BRIDGE NO. 4
BILL OF MATERIAL

BRIDGE

TIMBER:

FT. BM.

4 PCS. 12x12-16' N.P. {PICKED UP AT TUNNEL} 768

10 " 12x12-4 " " 480

TIM 10 " 3x12-16 " S.H. 480
1728

4 " 2x12-16' N.P. NEW 128

3 " 7x16-30' O.P. S.H. 840

4 " 6x8-16' " " 256

2 " 6x6-16' " " 96

10 " 6x8-9' " " 360
1552

12 " 6x12-4 R.W. 288

IRON:

10 BOLTS $\frac{3}{4}$ " x 18" S.H. 27 #

8 " $\frac{3}{4}$ " x 30" " 34 #

10 " $\frac{5}{8}$ " x 33" " 31

36 WASHERS 4" " 54

20 SPOOLS 4" " 100

CAST IRON

CARRIED FORWARD. 246

Mile 5.78

33

BRIDGE ⁺ NO. 4 CONT'D.

IRON:

BRO^t FORWARD.

246

10 # 40^B NAILS.

10

10 # 8" - BT SPIKES

10

266

1248 ^{from tunnel}

Pr 4

17.28

15.52

32.80*

3.60*

9,999,996.40

of

29.20*

+ FOR LENGTH AND COST, SEE PAGE 22

BRIDGE NO. 5
BILL OF MATERIAL

	TIMBER:			FT. B.M.
PI	2 PCS.	12x12-18'	R.W.	{ PICKED UP AT TUNNEL } 432
	12 "	6x12-4'	"	S.H. 288
				720
TI.	2 "	12x12-16'	N.P.	{ PICKED UP AT TUNNEL } 384
	4 "	2x12-16'	"	NEW 128
	9 "	3x12-16'	"	" 432
				944
	10 "	12x12-4'	O.P.	{ PICKED UP AT TUNNEL } 480
	3 "	7x16-30'	"	S.H. 840
	4 "	6x8-16'	"	" 256
	2 "	6x6-16'	"	" 96
	10 "	6x8x9'	"	" 360
	6 "	3x10-18'	"	" 270
				2307
	40	OLD TIES FOR APRON....		{ PICKED UP AT TUNNEL }

Mile 6.29

34

BRIDGE^x NO. 5 (CONT'D)

IRON:

10 BOLTS	$\frac{3}{4} \times 18"$	S.H.	#
			27
8	$\frac{3}{4} \times 30"$	"	34 #
10	$\frac{5}{8} \times 33"$	"	31
10 #	B.T. STRIKES $\frac{3}{8}-8"$	"	10
20 #	60 ^B NAILS.		20
36	4" WASHERS.		54
20	SPOOLS.		100
			276

CAST
IRON

432
384
480
1296
1280
2576

^x FOR LENGTH AND COST - SEE PAGE 23

BRIDGE NO. 6
BILL OF MATERIAL

PILING: O.P. SH. 172 LIN. FT.

O.P. NEW 456 " "

628

TIMBER:

FT. B.M.

10 PCS. 12x12-16' TREATED PINE. 1920

2 PCS 12x12-24' REDWOOD. 576[✓] RV

4 " 2x12-16' NR. 128

2 " 2x4-16' " 21^{NP.}

4 " 3x12-16' " 192

917

27 " 7x16-30' O.P. SH. 7560

102 " 6x8-9' " " 3672

21 " 6x6-16' " " 1008

52 " 6x8-16' " " 3328

4 " 12x12-18' " " 864

20 " 12x12-29' " " 6960

4 " 12x12-16' " " 768

11 " 12x12-14' " " 1848

1254 LIN. FT. 3x10' " " 3135

29143

Mile 6.87

35

BRIDGE[†] NO. 6 (CONT'D)

IRON:

160 BOLTS	$\frac{3}{4}$ " x 18"	SH.	424 [#]
36 "	$\frac{3}{4}$ " x 21"	NEW.	109
64 "	$\frac{3}{4}$ " x 30"	SH.	269
66 "	$\frac{5}{8}$ " x 33"	"	202
36 D. "	$\frac{7}{8}$ " x 30"	NEW.	202
42 D "	$\frac{3}{4}$ " x 18"	SH.	147
200 [#]	BT SPIKES.	SH.	200
50 [#]	" " $\frac{3}{8}$ " x 8"		50
50 [#]	60 ² NAILS		50
500	WASHERS $\frac{3}{4}$ "	SH.	750
128	SPOOLS	"	640
42	DOWELS 1" x 8"	"	47
			<u>3090</u>

CAST
IRON

[†] FOR LENGTH, COST AND OTHER DATA, SEE PAGE 24

BRIDGE NO. 7
BILL OF MATERIAL.

PIILING: NONE

TIMBER:

FT. BM.

8 PCS.	12x12-14'	O.P. SH.	1344
3 PCS.	12x12-16'	" "	576
10 PCS.	12x12-30'	" "	3600
16 "	6x8-16'	" "	1024
16 "	6x6-16'	" "	768
80 "	6x8-9'	" "	2880
24 "	7x16-30'	" "	6720
380 LIN. FT.	3x10	" "	950
2 PCS.	4x12-16'	N.P. TREATED.	1786 ²
2 PCS.	4x12-18'	N.P. TREATED.	144
4 "	2x4-16'	" "	43
2 "	3x12-16'	" "	96
4 "	12x12-16'	" "	768
13 "	12x12-16'	" PICKED UP-TUNNEL.	1051 ²
			2496 ²
68 PCS.	6x12-4'	REDWOOD SH.	1632
2 "	12x12-18'	" "	432
1 "	12x12-20'	" "	240
			2304 ²

BRIDGE NO. 7 (CONT'D)

IRON:

58 BOLTS	$\frac{3}{4} \times 18$ "	2 nd	154 #
12 "	$\frac{3}{4} \times 21$ "	new	36
56 "	$\frac{5}{8} \times 33$ "	2 nd	174
54 "	$\frac{3}{4} \times 30$ "		227
28 D. "	$\frac{3}{4} \times 20$ "	NEW.	91
28 DOWELS	1" x 8"		31
112 SPOOLS	4"		560
360 WASHERS	$\frac{3}{4} \times 4$	CAST IRON	540
60 #	60 ^{lb} NAILS		60
			1873



BRIDGE NO. 8
BILL OF MATERIAL.

PILING:

140 LIN. FT. O.P. SH. PICKED UP AT BR. #3

19 " " O.P. NEW.

20 " " O.P. FROM OLD LINE.

179

TIMBER:

FT. BM.

3 PCS. 12x12-16' N.P. FROM TUNNEL 576

2 " 2x4-16' N.P. NEW 20

1 " 3x16-16' " " 48
644

2 " 12x12-12' O.P. SH. 288

12 " 7x16-30' " " 3360

6 " 6x8-16' " " 384

8 " 6x6-16' " " 384

40 " 6x8-9' " " 1440

120 LIN. FT. 3x10' " " 300

6156✓

Mile 7.68

37

BRIDGE^x NO. 8 (CONT'D)

IRON:

24 BOLTS	$\frac{3}{4} \times 30$ "	S.H.	101 #
32 "	$\frac{5}{8} \times 33$	"	99 #
18 D. "	$\frac{7}{8} \times 20$	NEW	69
114 WASHERS,	$\frac{3}{4} \times 4$ "	S.H.	171
64 SPOOLS,	4"	"	320
20 [#] 60 ^P NAILS		NEW	20
			780

CAST
IRON

576

x FOR LENGTH, COST AND OTHER DATA, SEE PAGE 26

BRIDGE NO. 9
BILL OF MATERIAL.

PILING:

256 LIN. FT. O.P. SH. FROM OLD LINE.

TIMBER:

FT. BM.

1 PCS.	12 x 12 - 14'	O.P. SH. FROM OLD LINE	168
10 "	6 x 8 x 16'	" " " " "	640
10 "	6 x 6 - 16'	" " " " "	480
50 "	6 x 8 - 9'	" " " " "	1800
15 "	7 x 16 - 30'	" " " " "	4200
210 LIN. FT.	3 x 10'	" " " " "	525
			7913 ^v
1 PCS.	2 x 12 - 16'	N.P.	32
2 "	3 x 12 - 16'	"	96
2 "	2 x 4 - 16'	"	20
			148 ^v
5 "	12 x 12 - 16'	N.P. FROM TUNNEL	960

Mile 7.57 On Mill Spur.

38

BRIDGE * NO. 9 (CONT'D)

IRON:

				#
30 BOLTS	$\frac{3}{4}$ x 30"	S.H. FROM OLD LINE		126
34 "	$\frac{5}{8}$ x 33"	" " " "		106
26 "	$\frac{3}{4}$ x 18"	" " " "		70
4 "	$\frac{3}{4}$ x 21"	" " " "		12
22 D. "	$\frac{7}{8}$ x 20"	NEW.		83
20 #	60 NAILS	"		20
192	WASHERS $\frac{3}{4}$ -4"	S.H. FROM OLD LINE.		288
68	SPOOLS 4"	" " " "		340

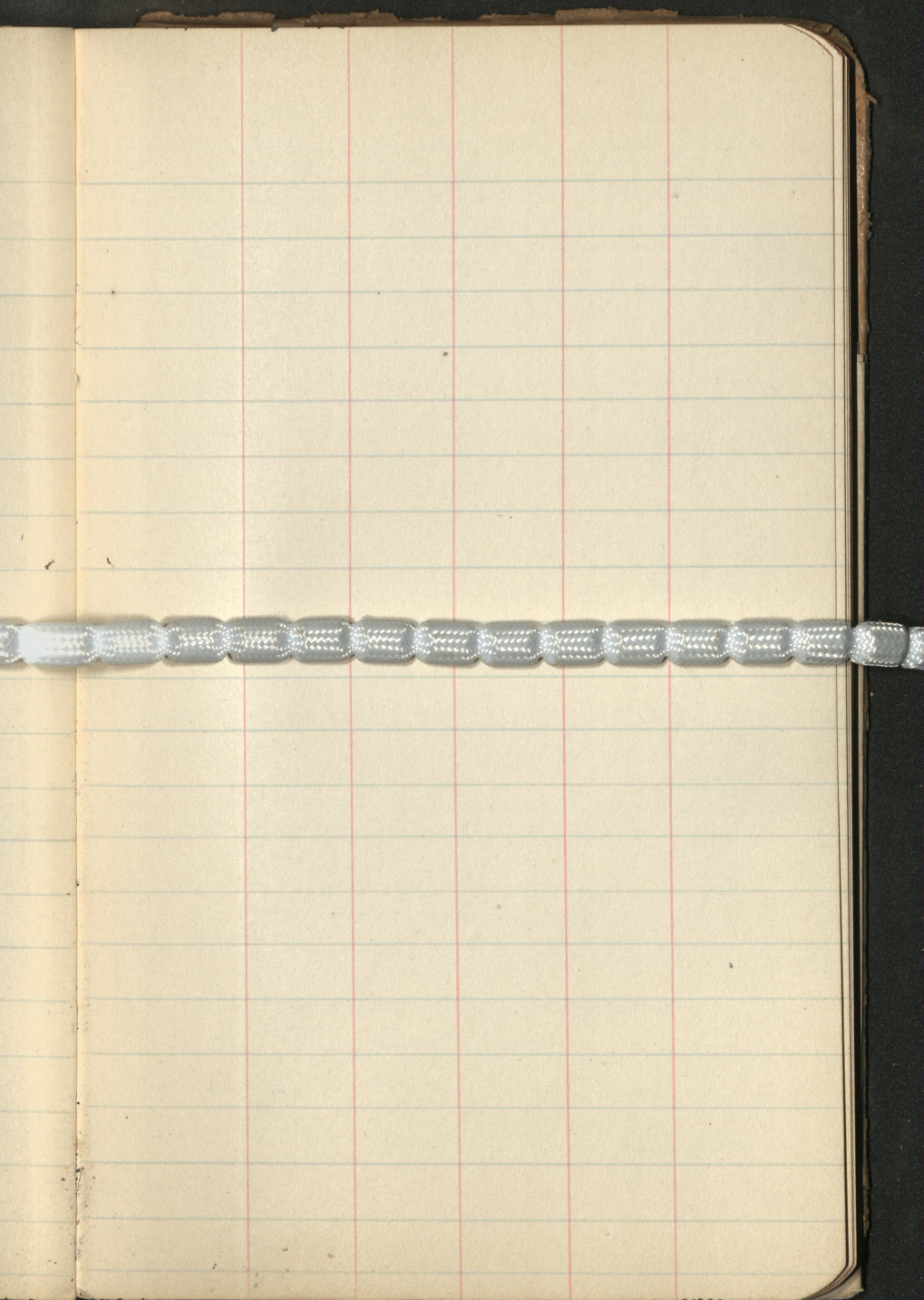
CAST
IRON

1045

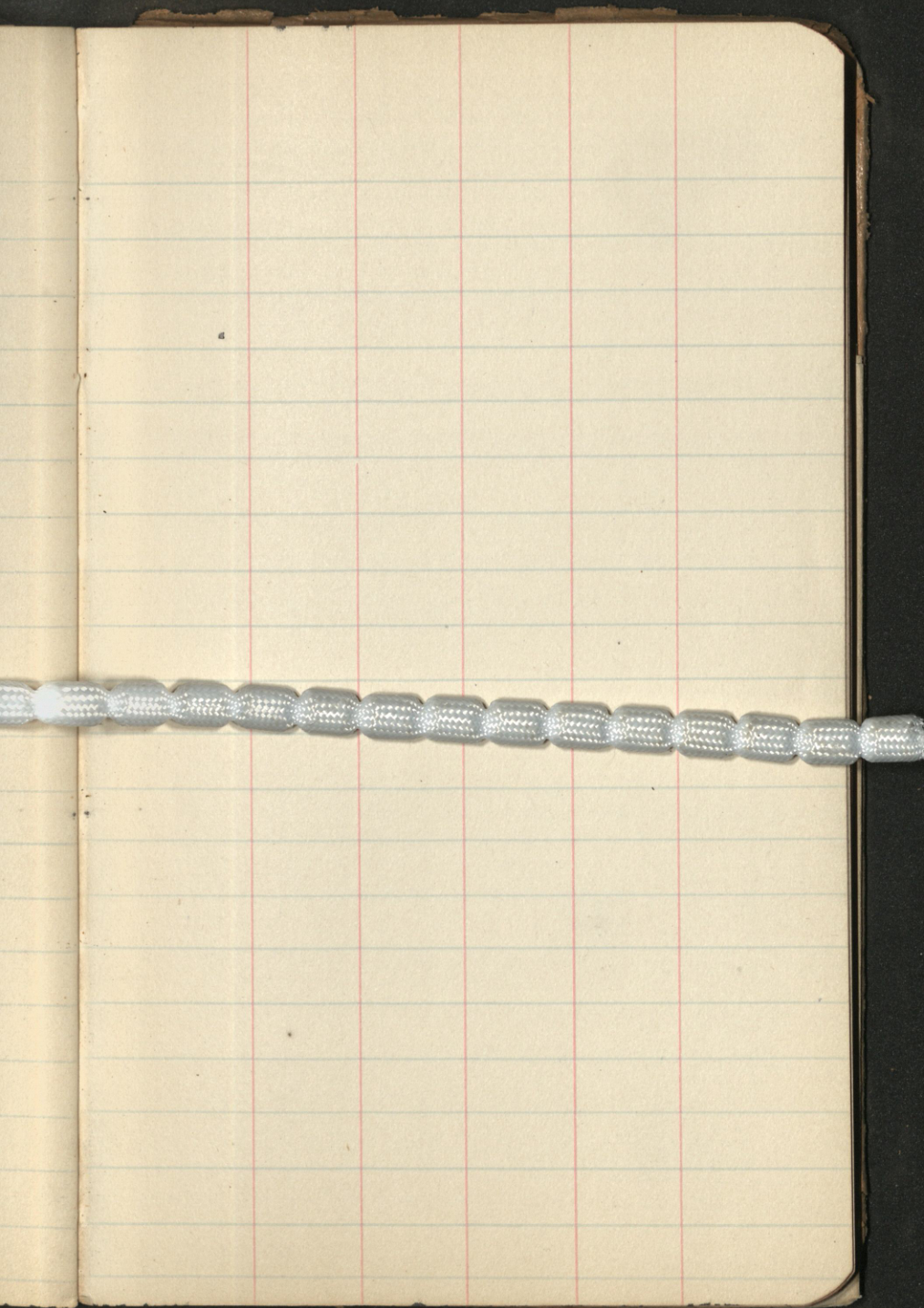
960
576
2496
2076
1248
9856
1280
8576
1296
Spt. 1/2

* FOR LENGTH, COST AND OTHER DATA, SEE PAGE 27









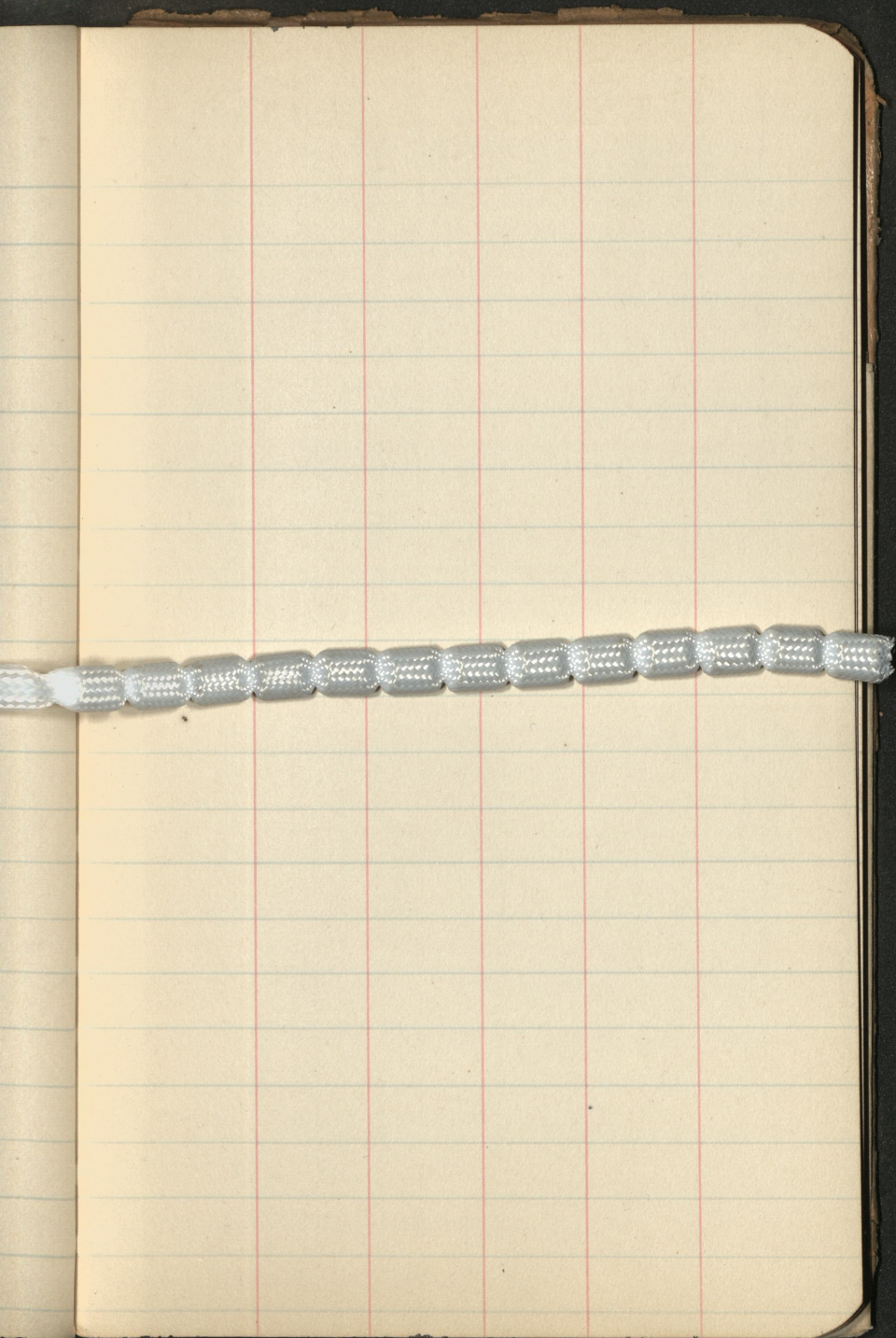




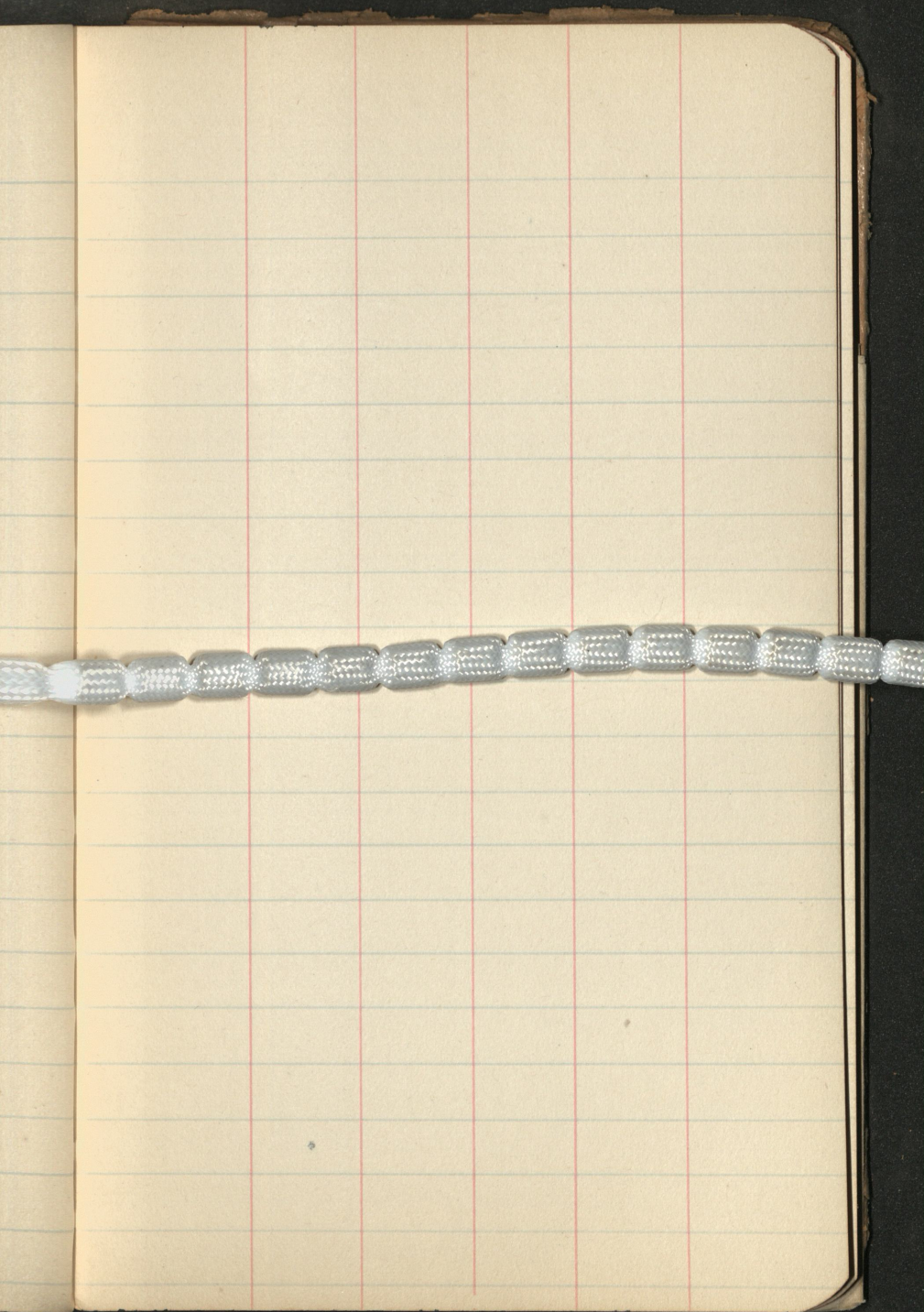




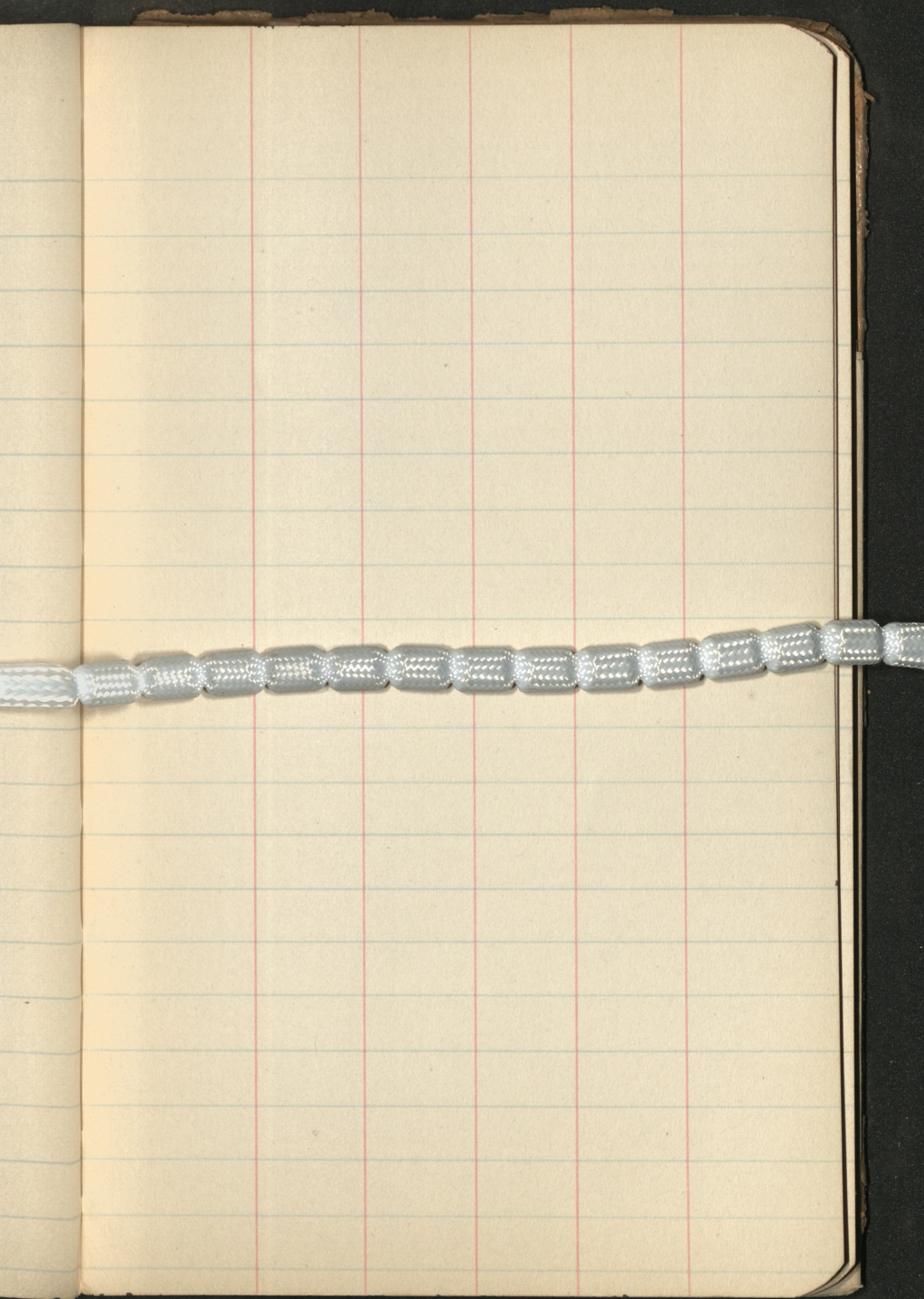




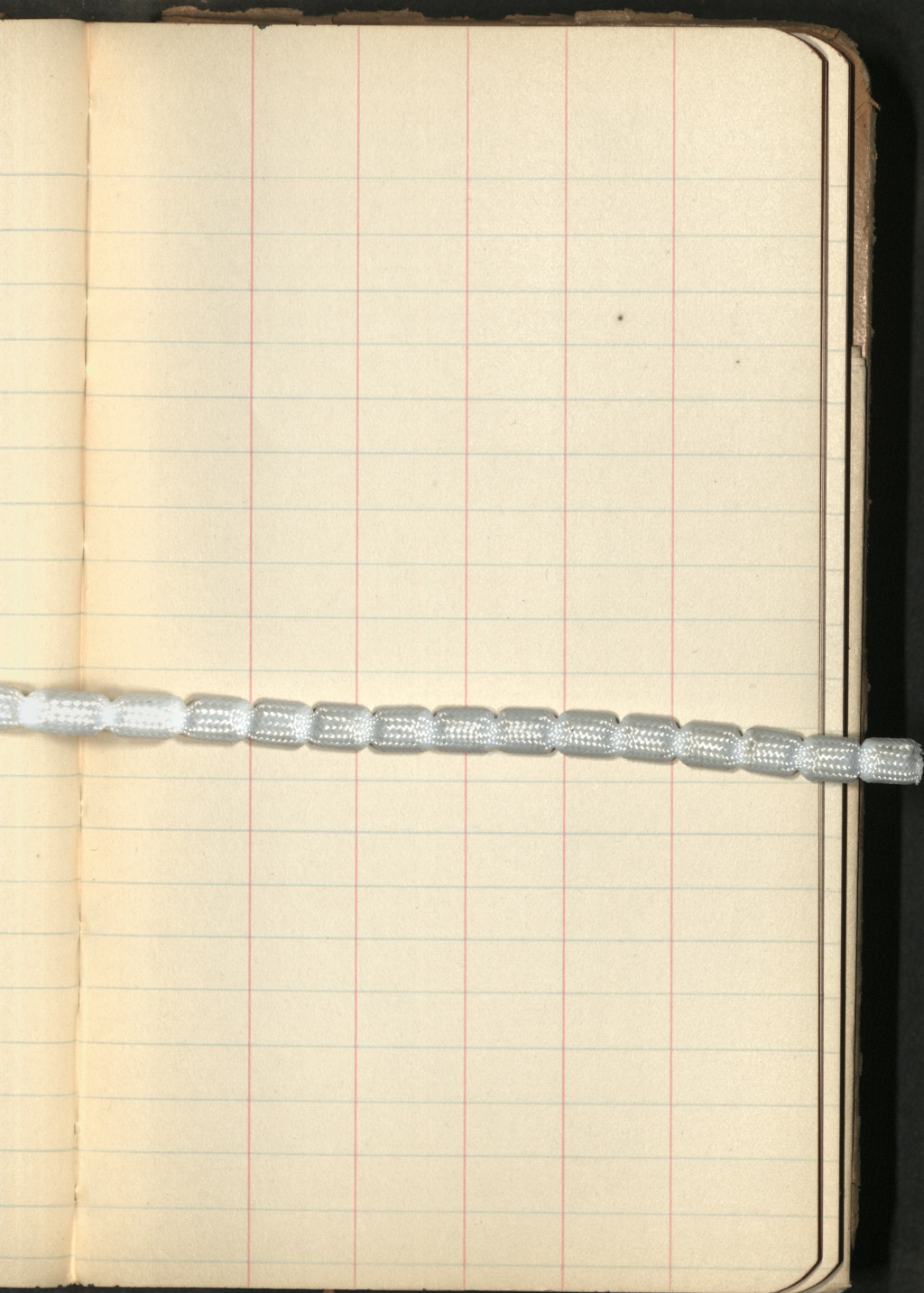




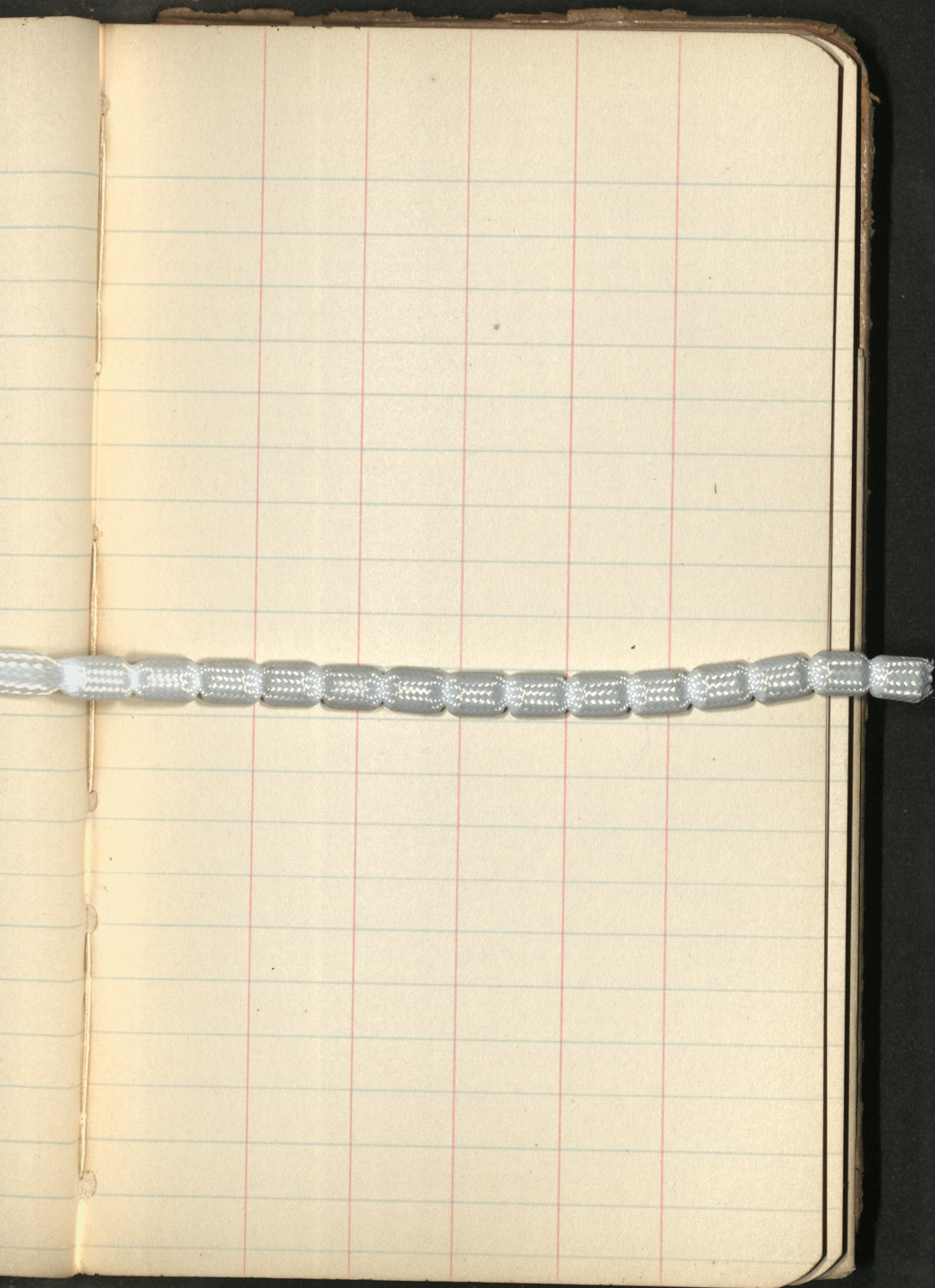




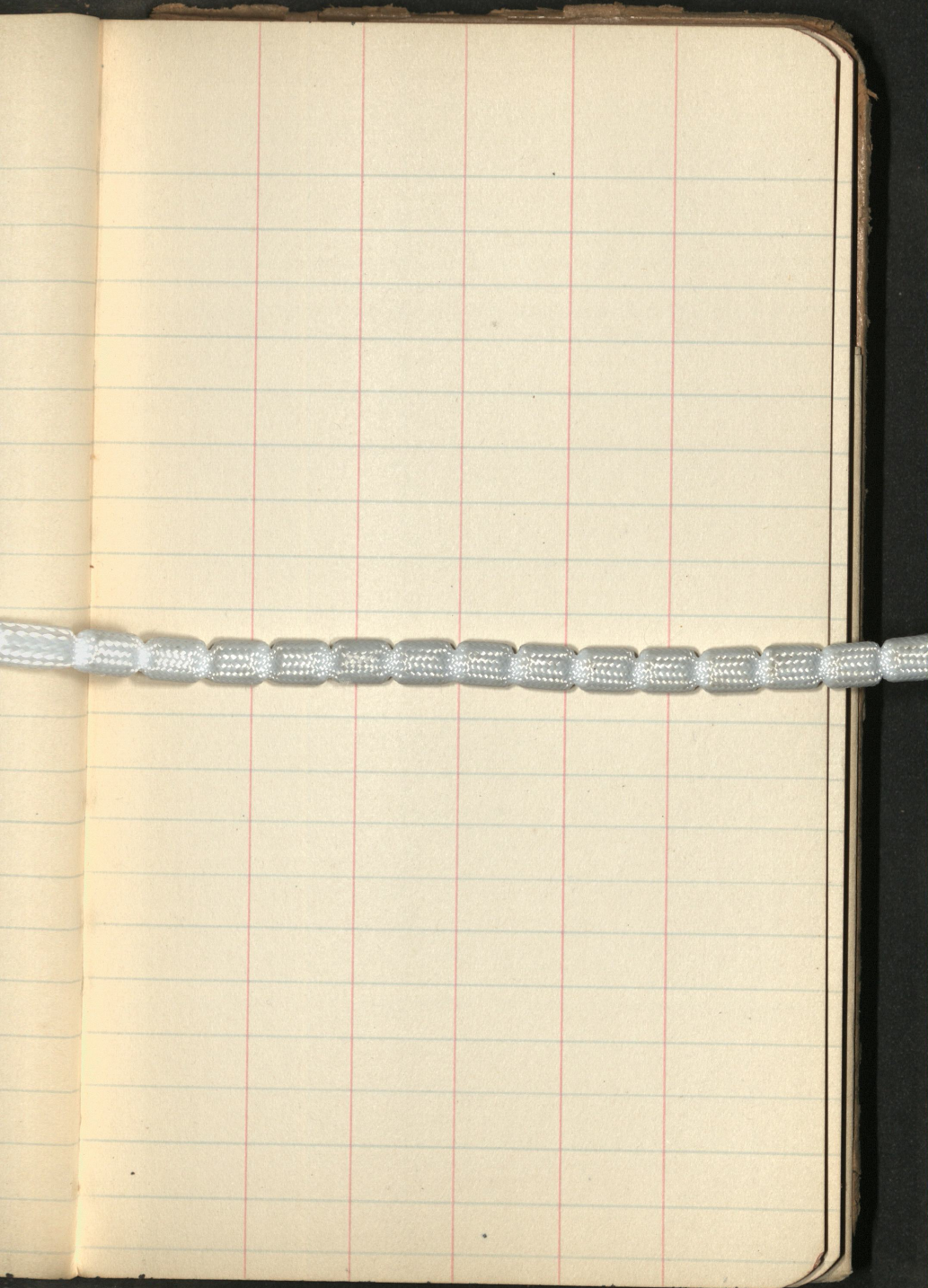




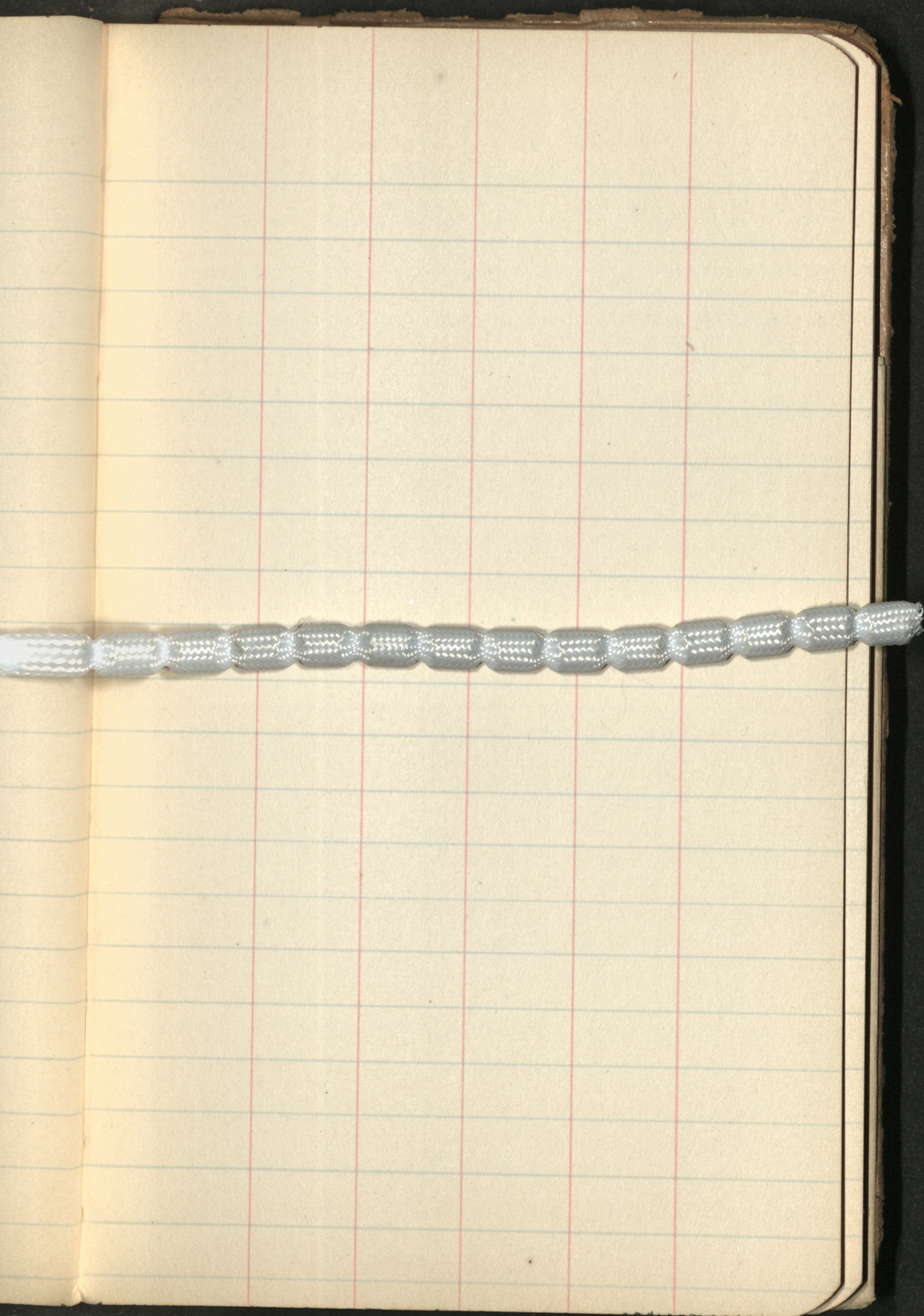




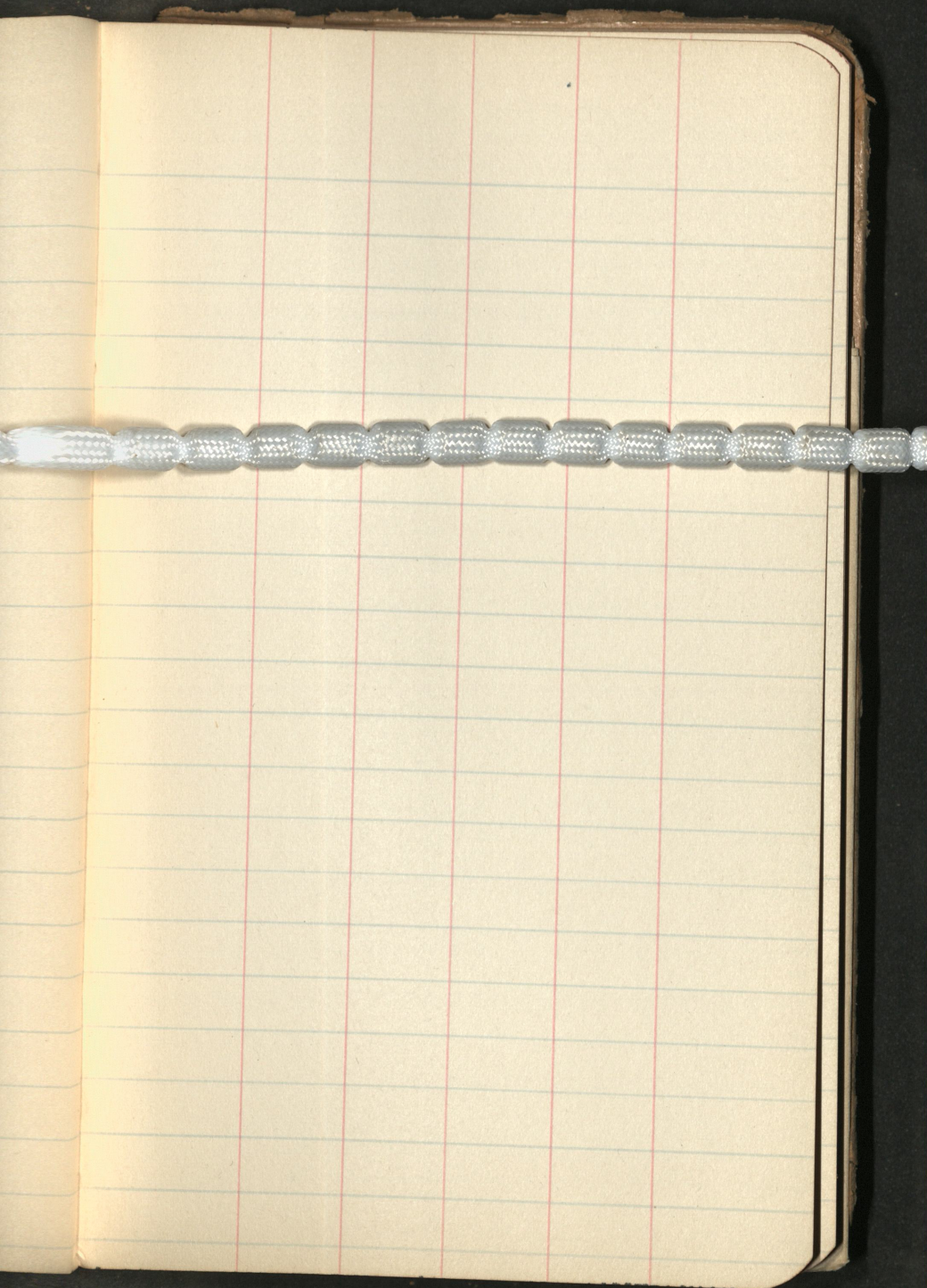


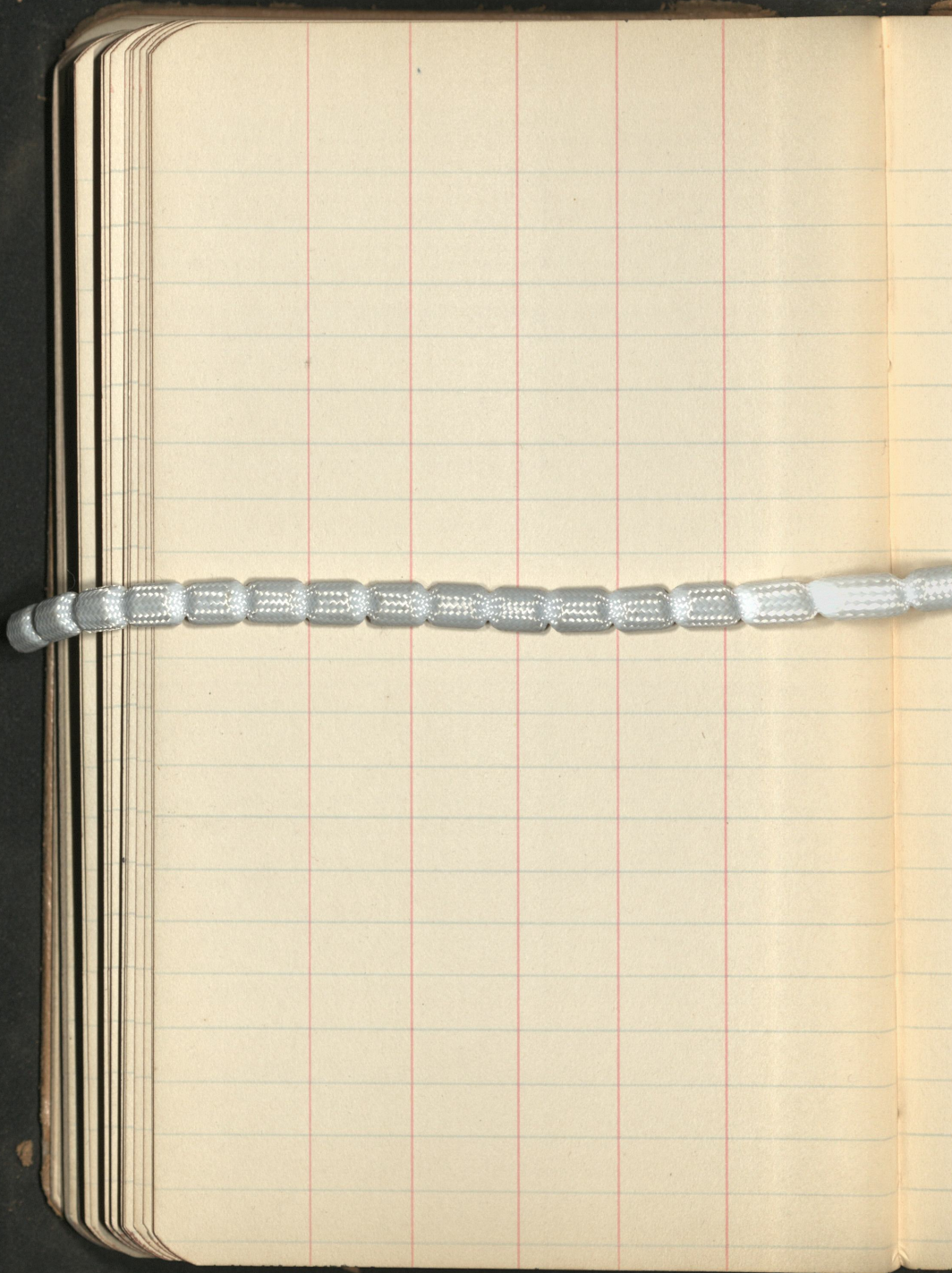


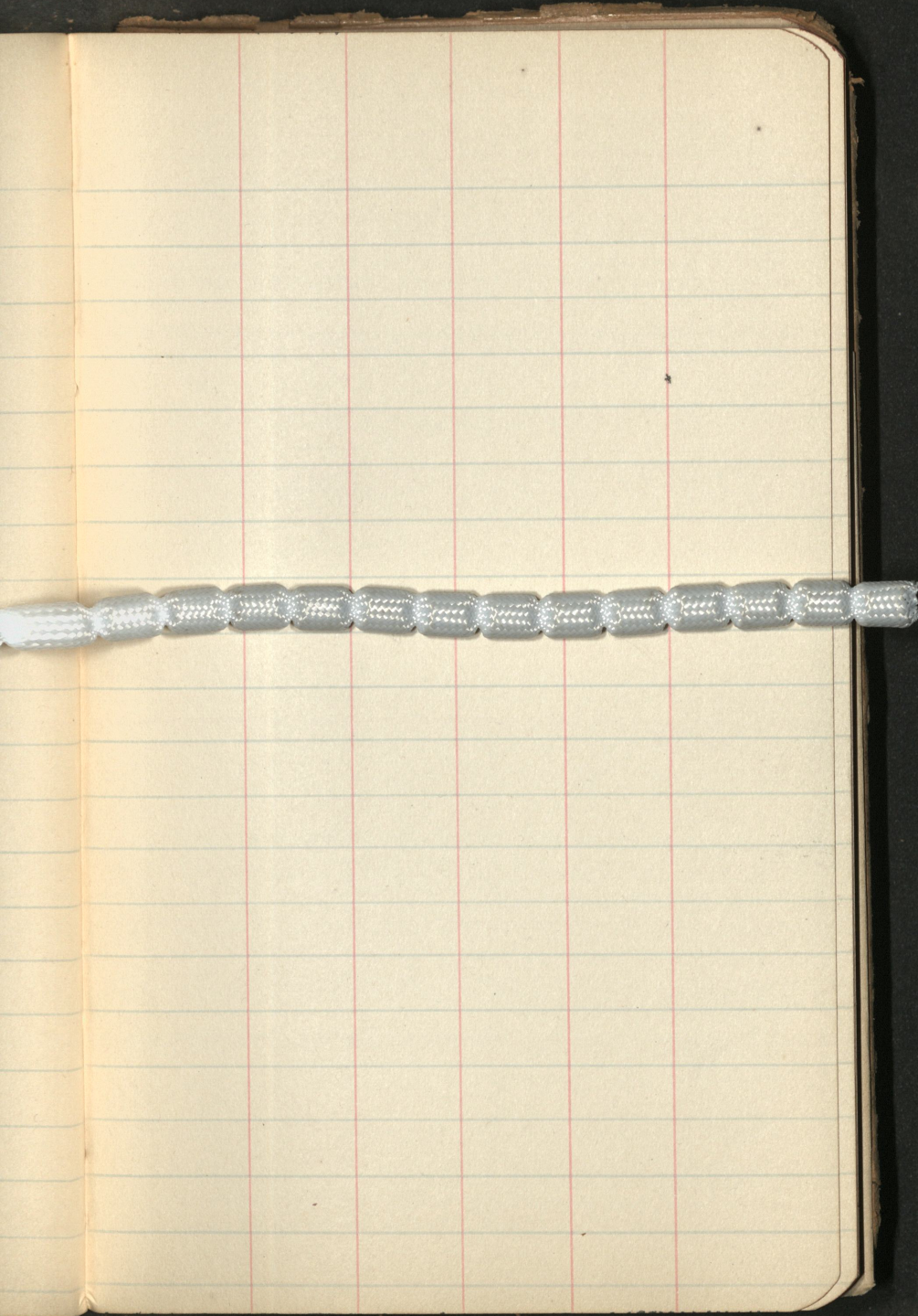


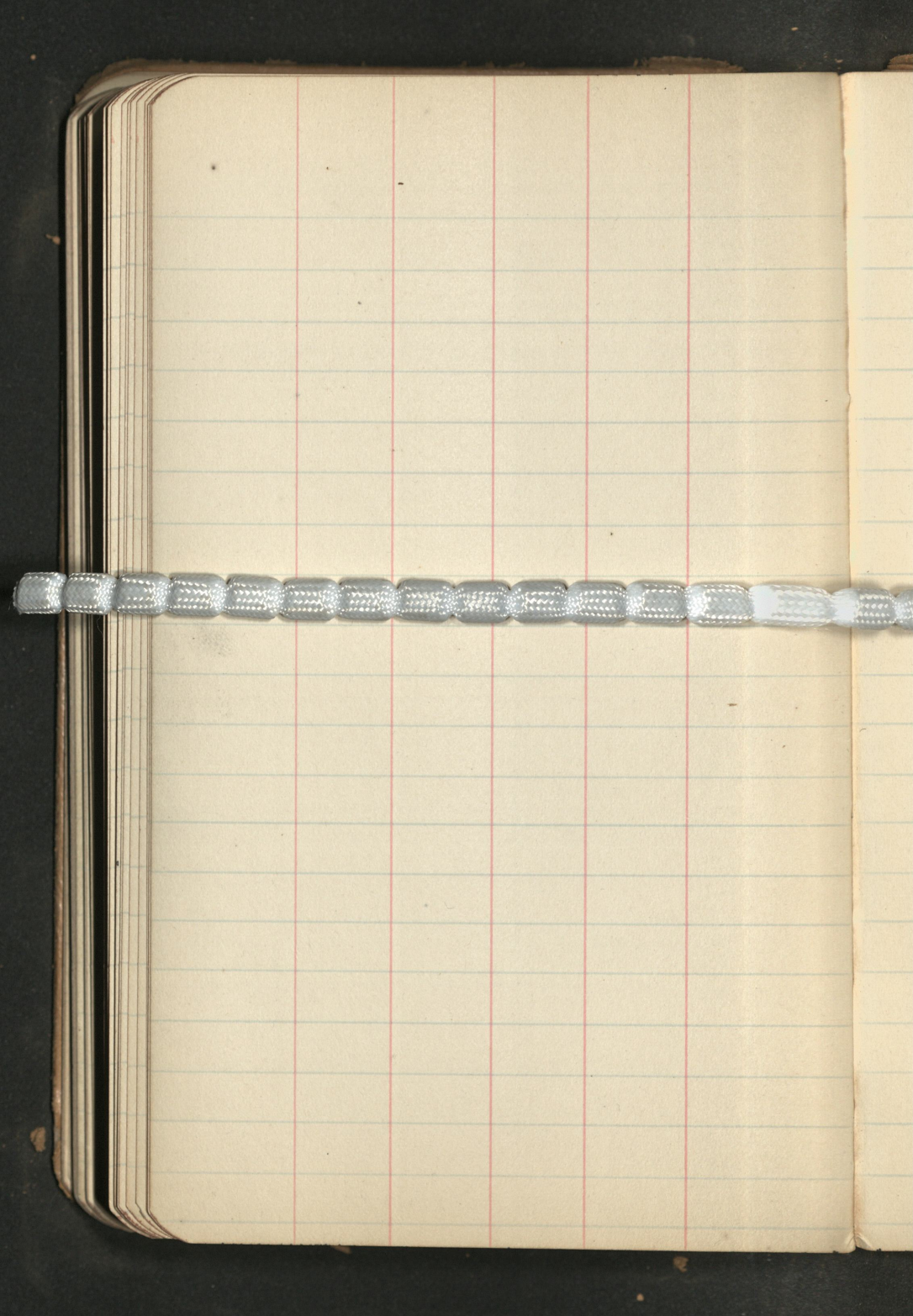


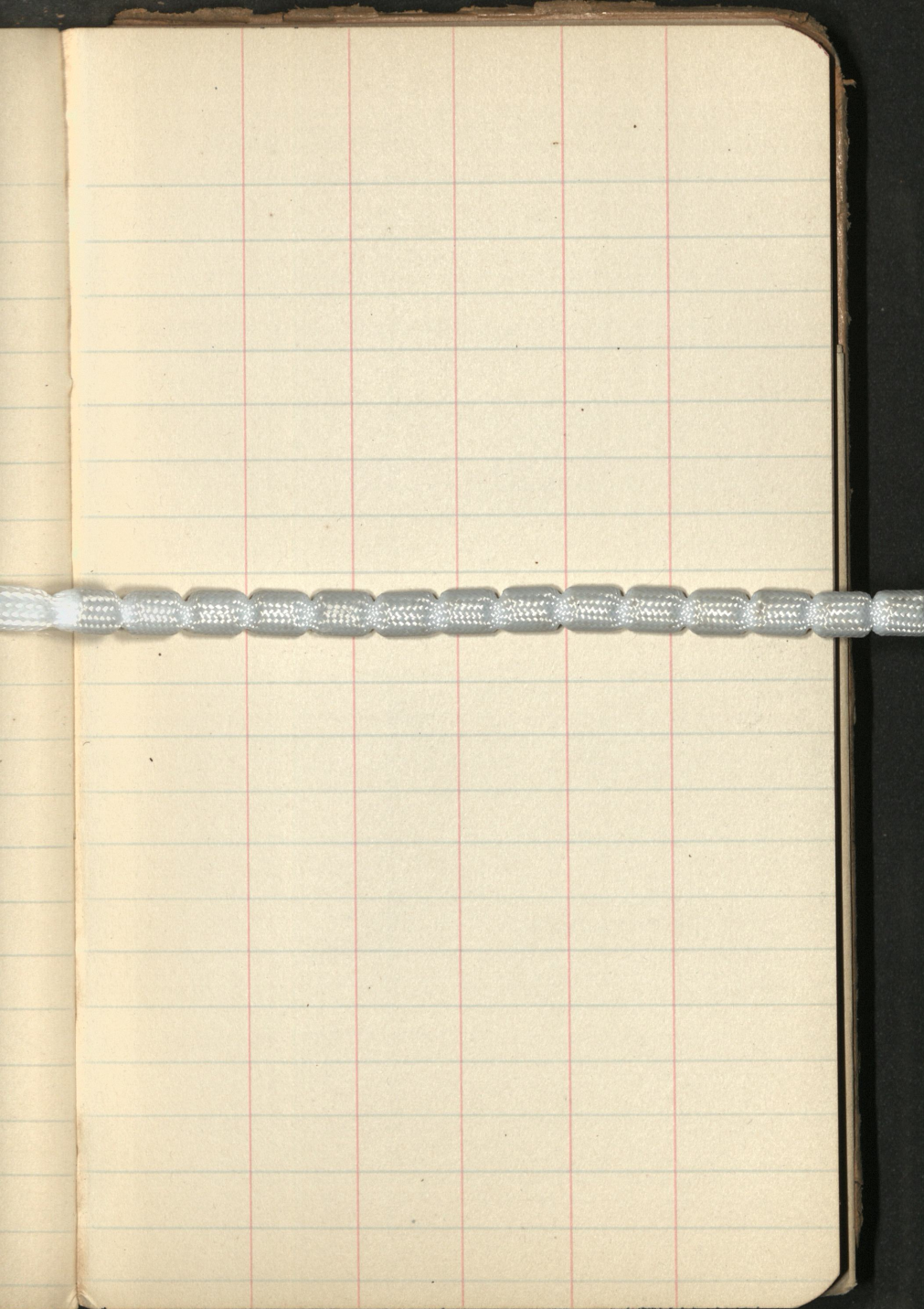


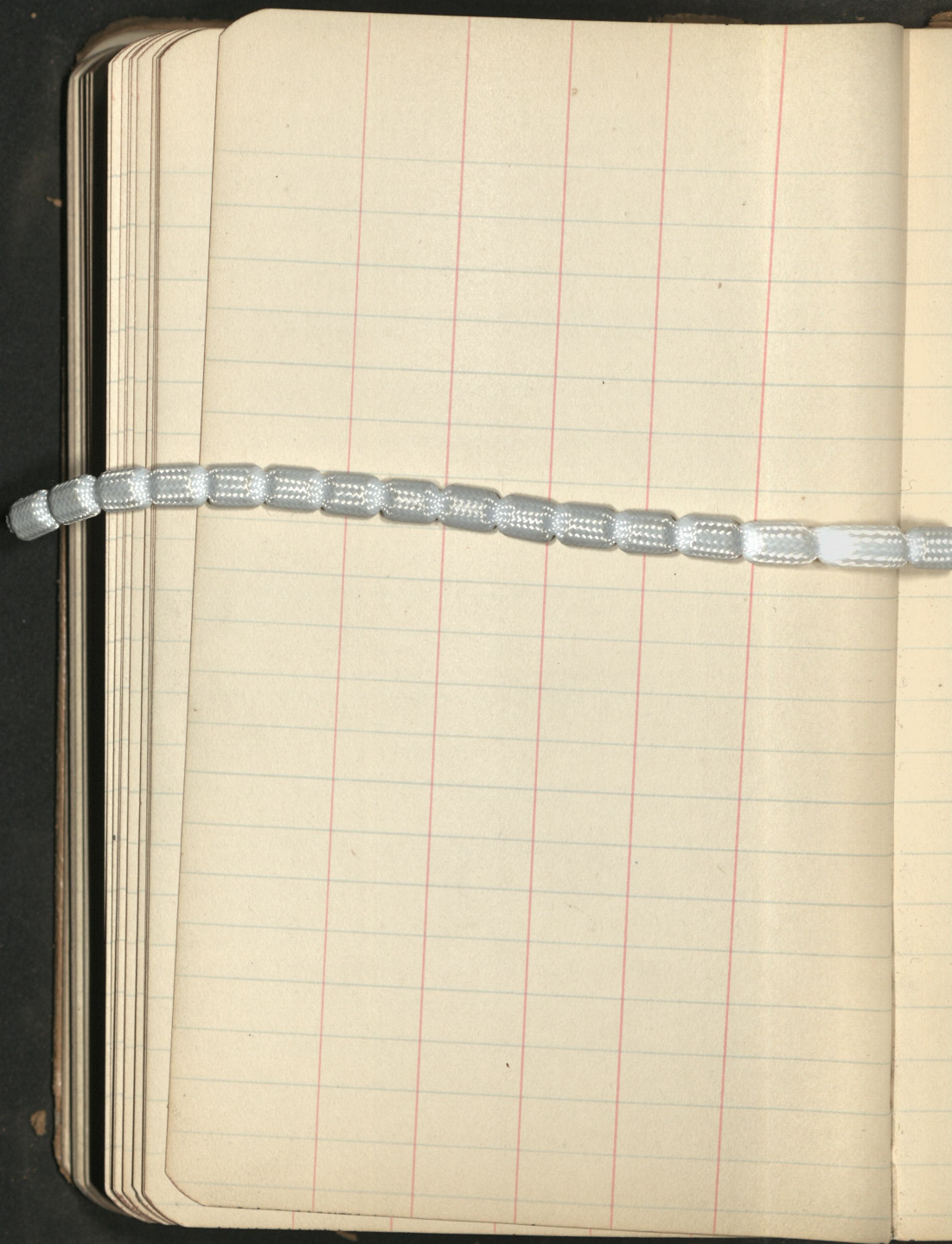




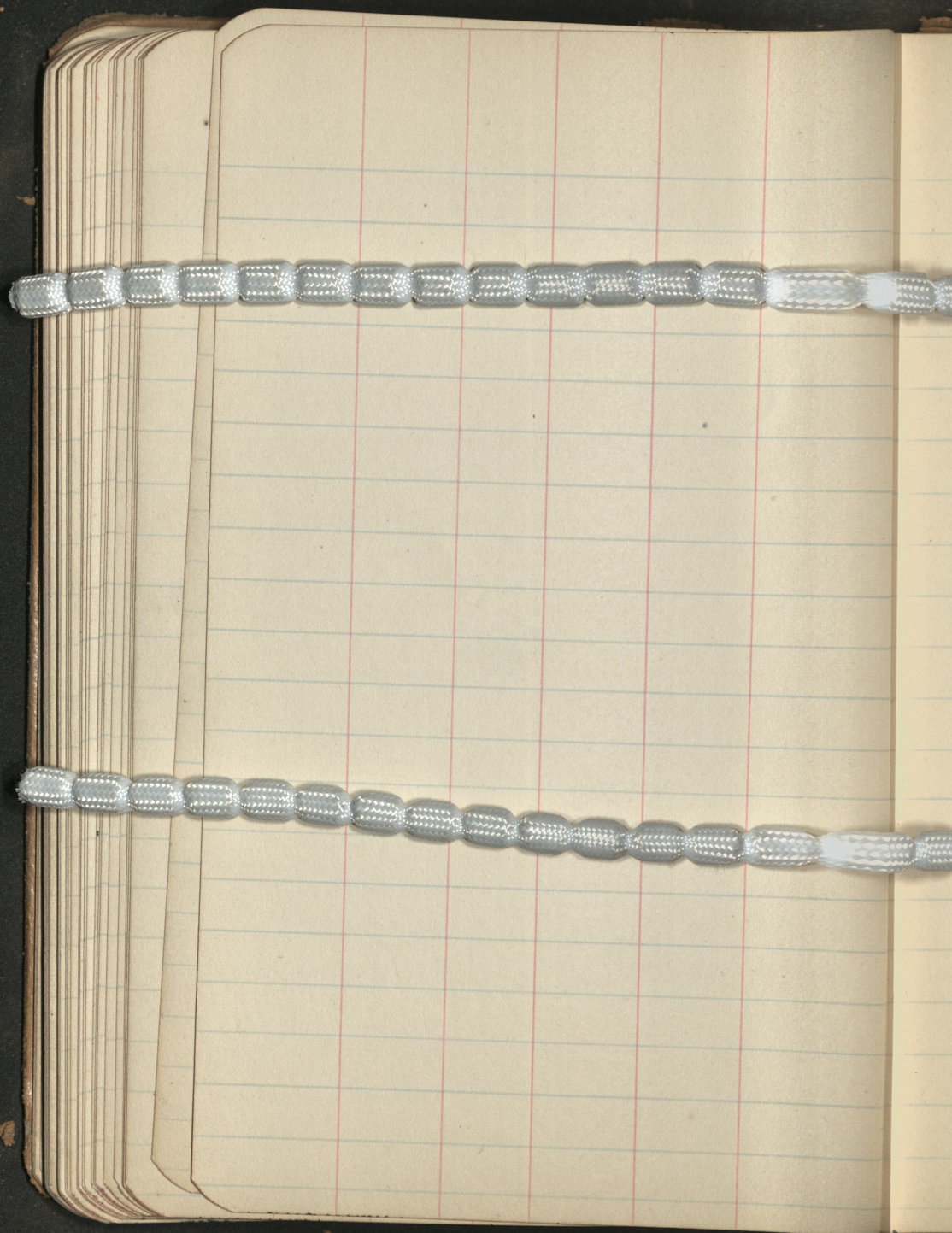


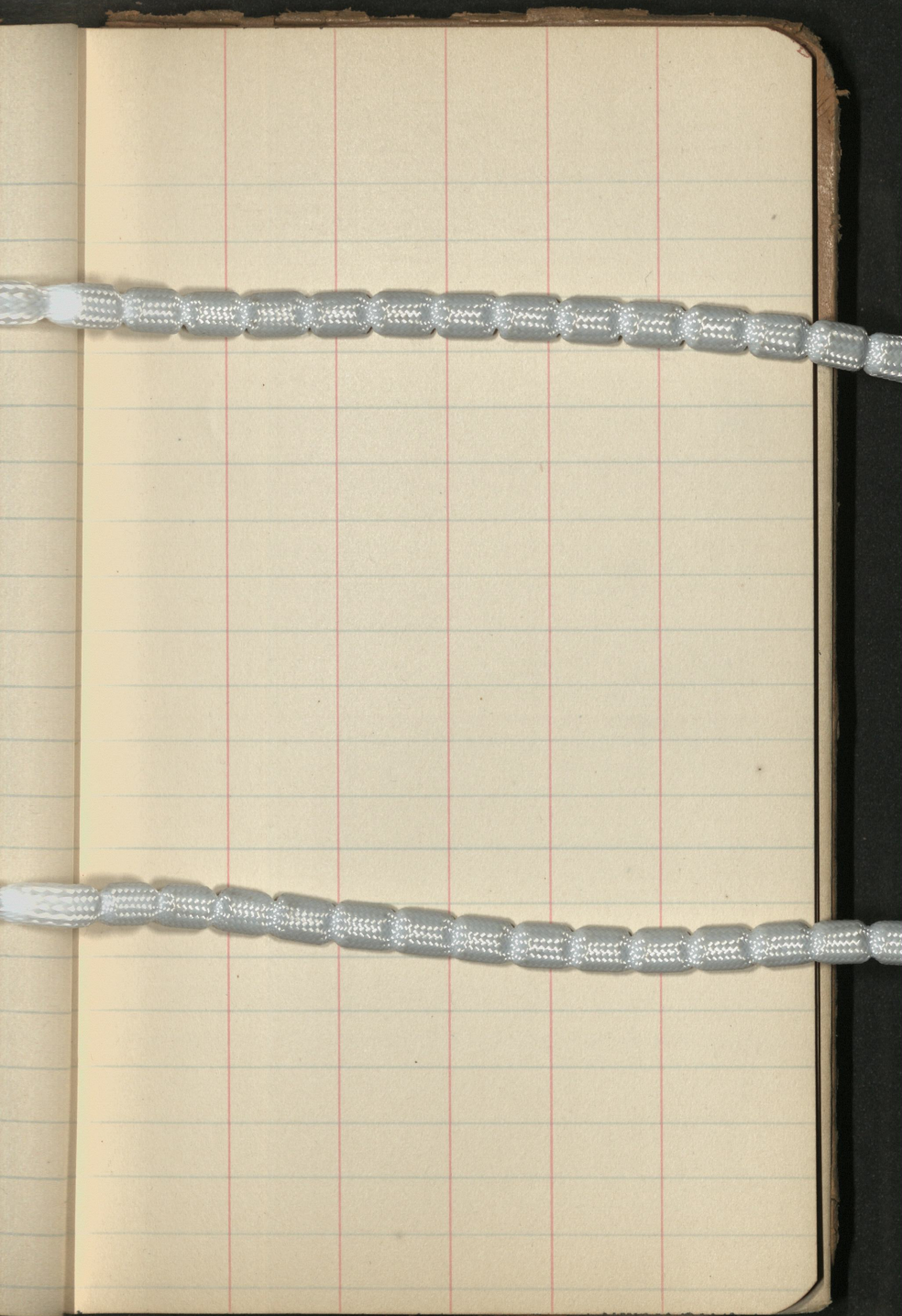


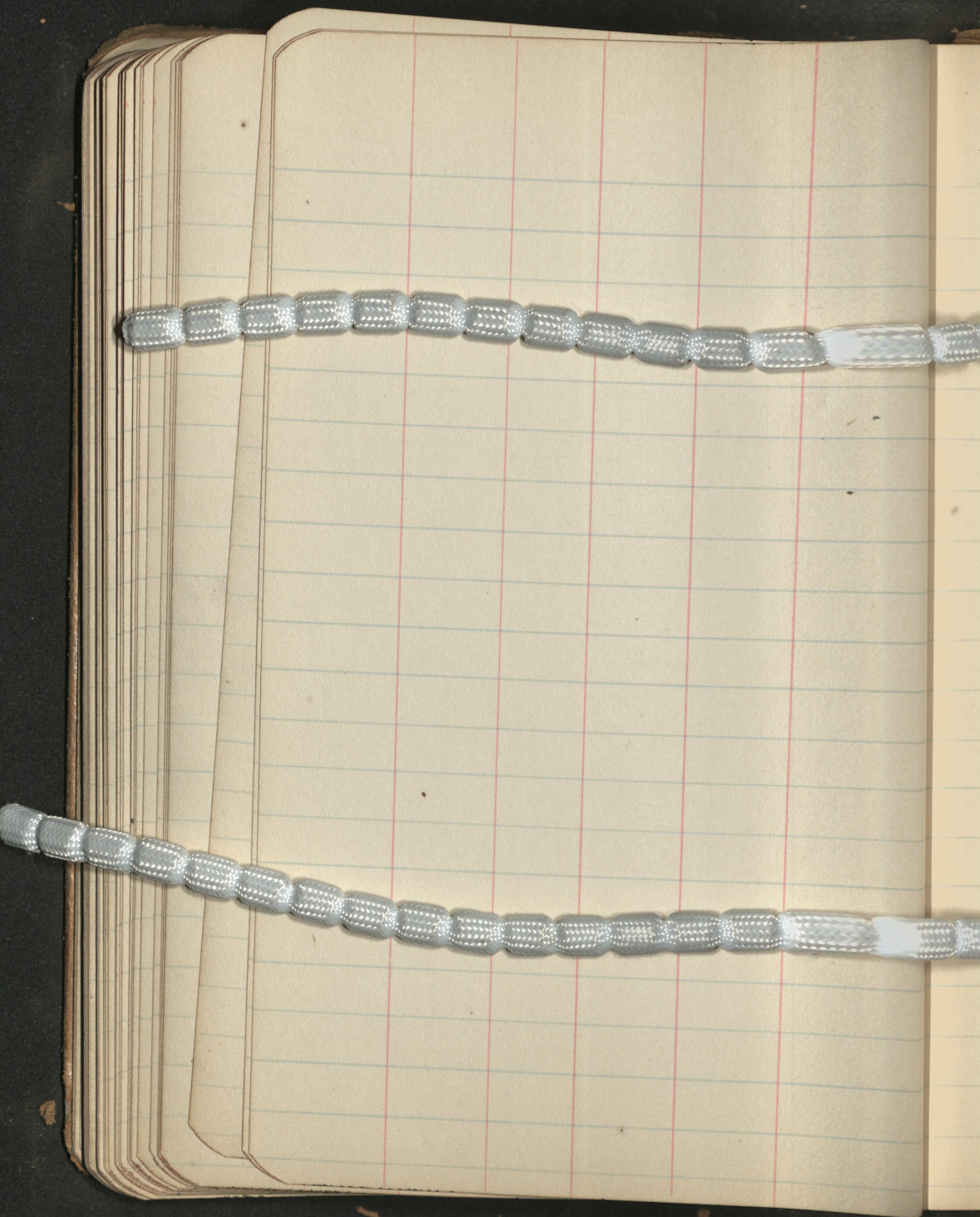


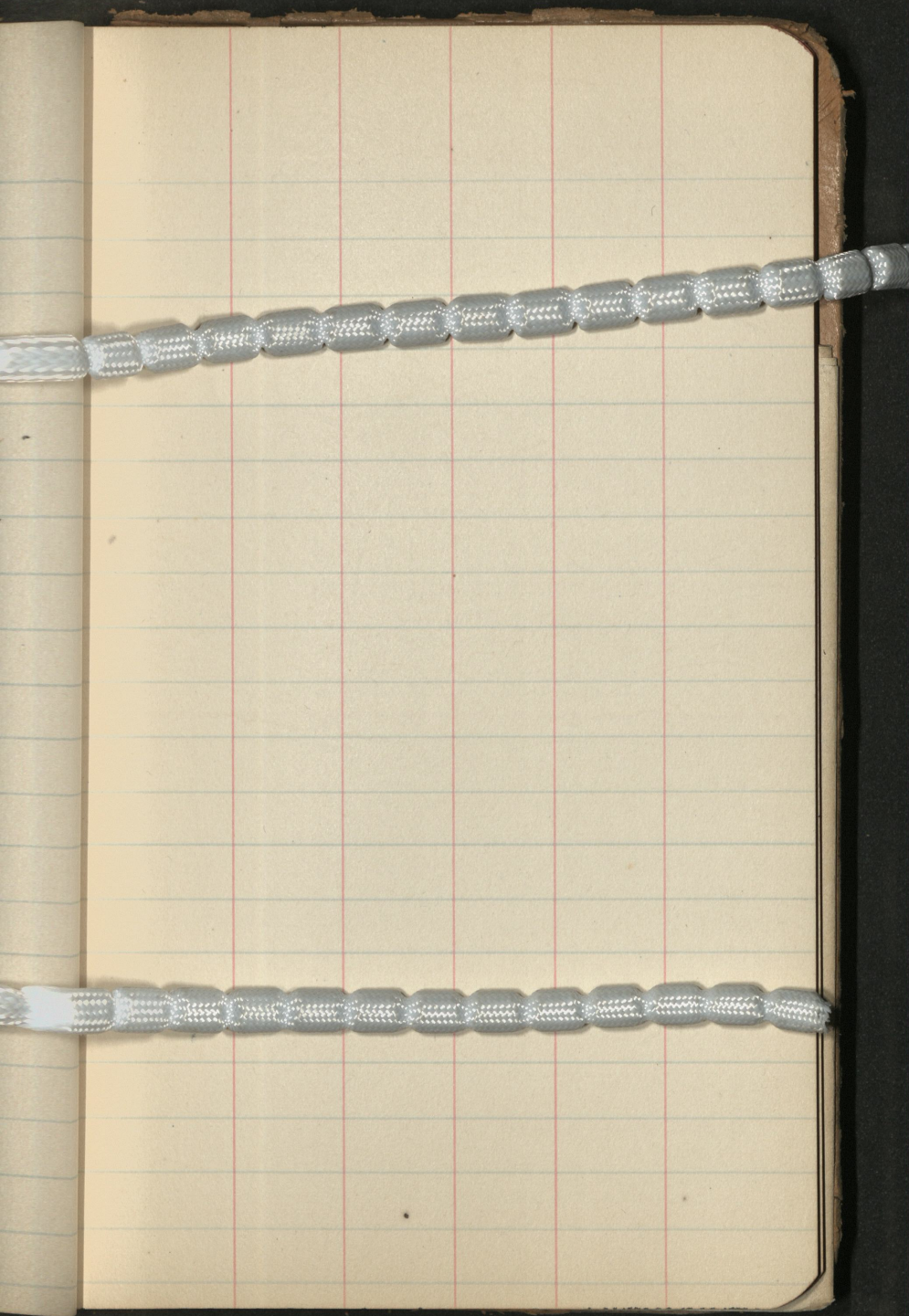


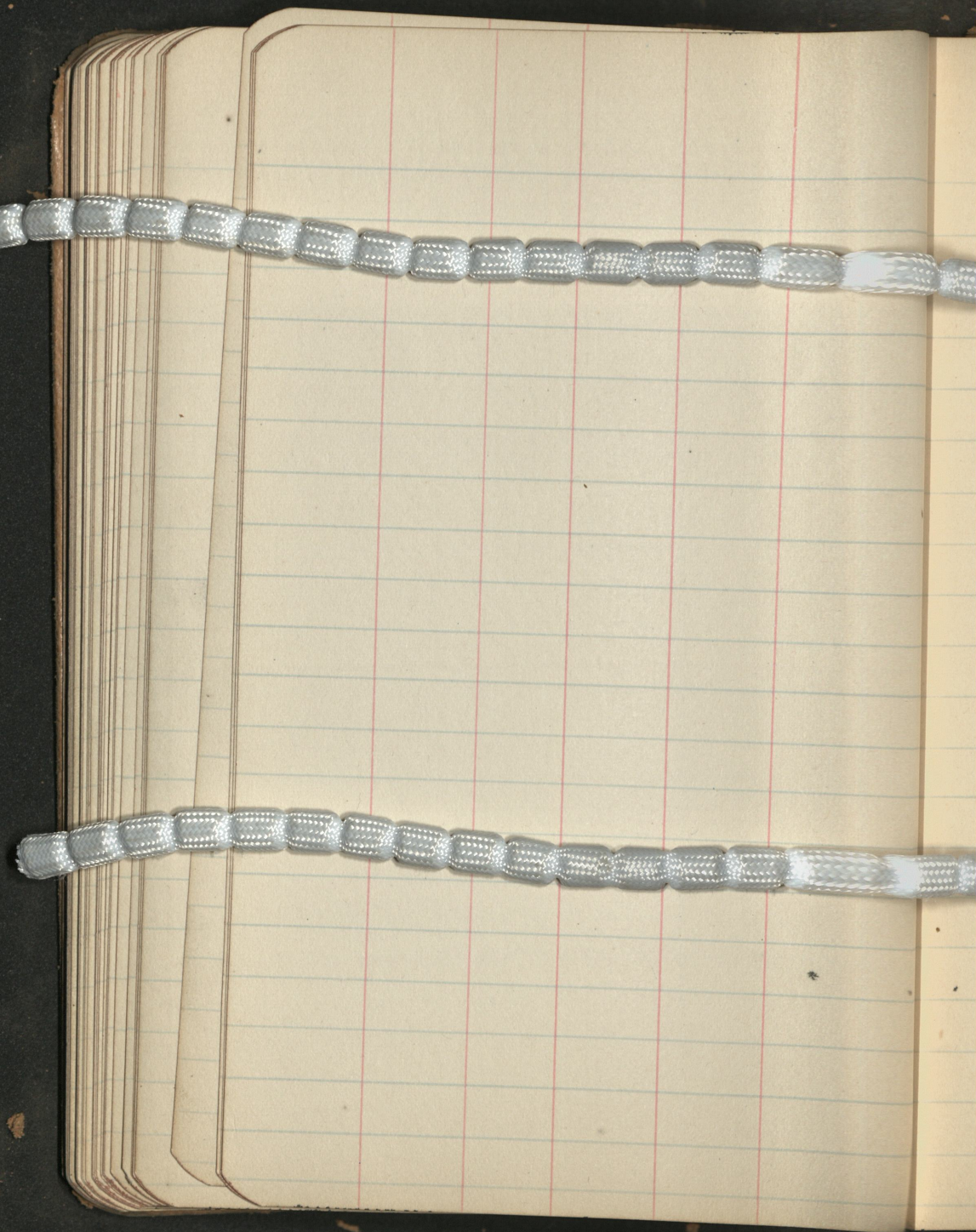




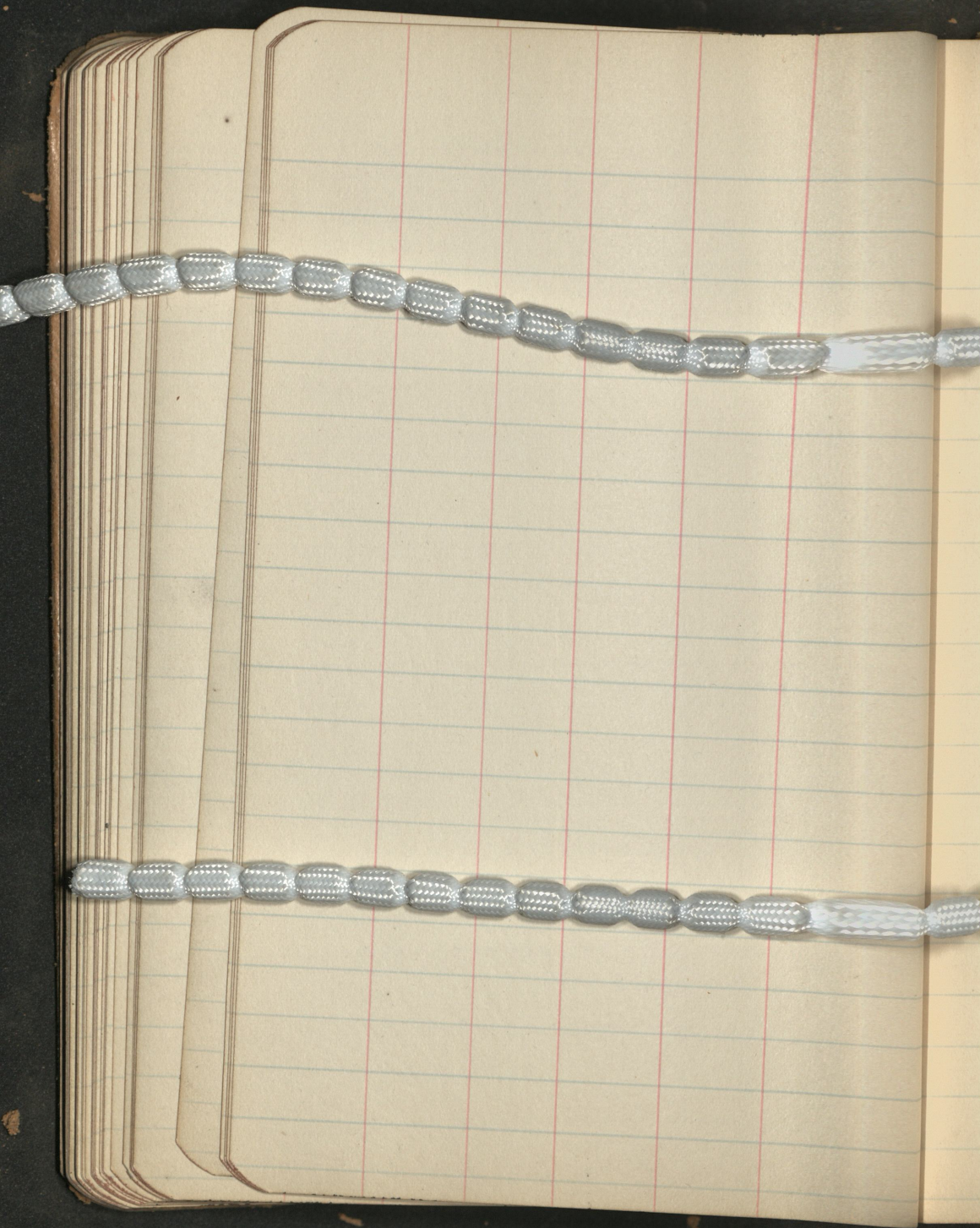




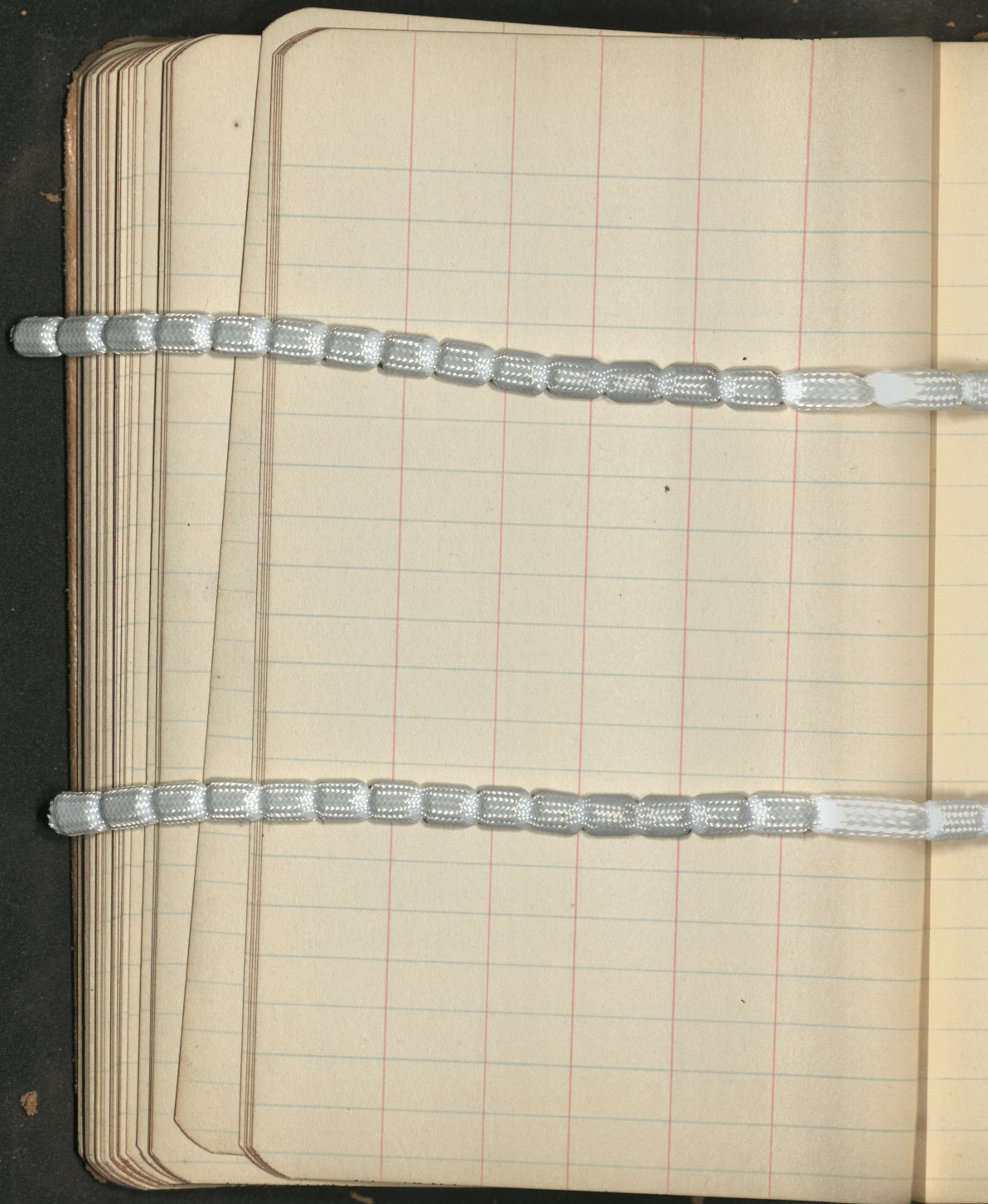


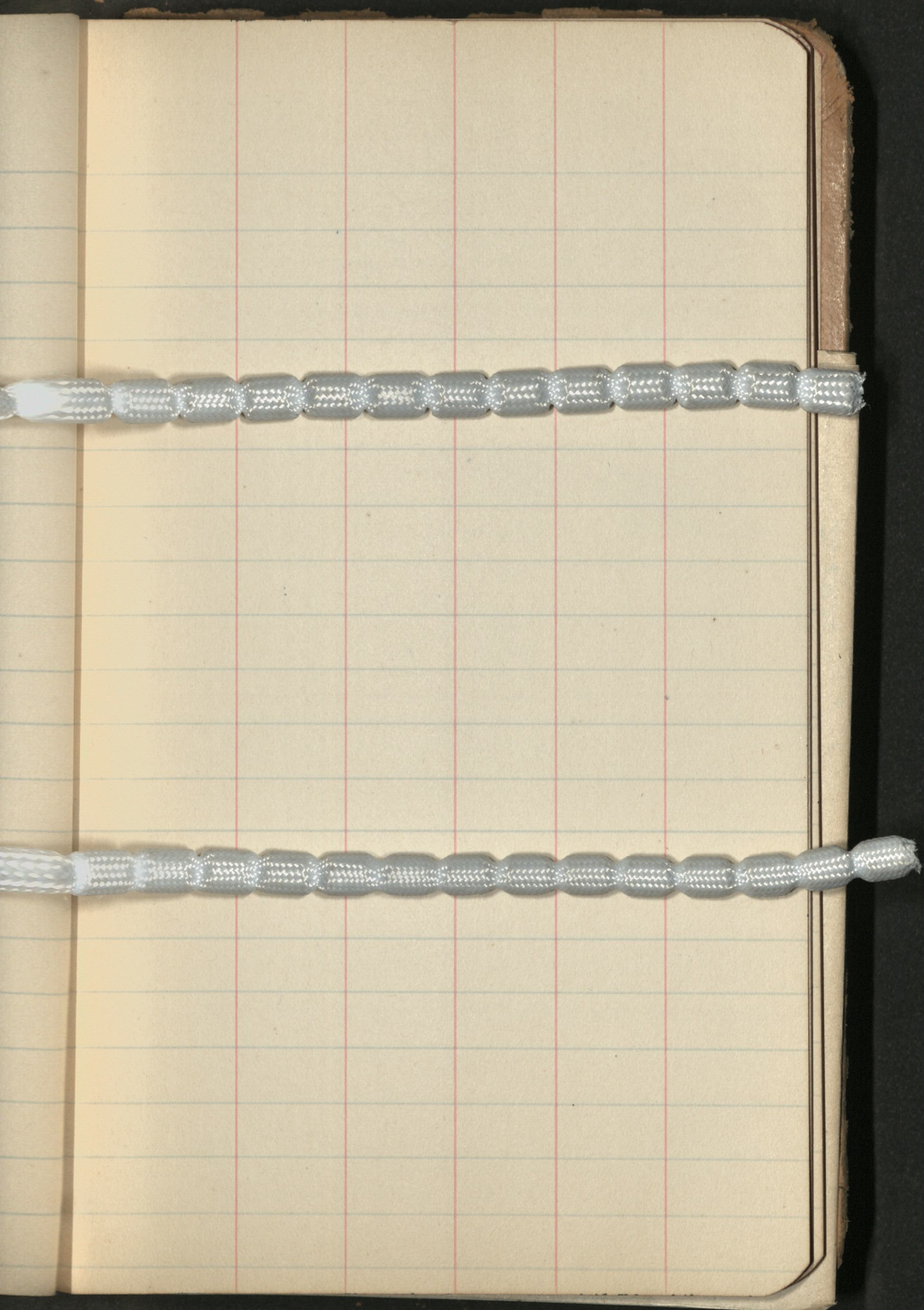


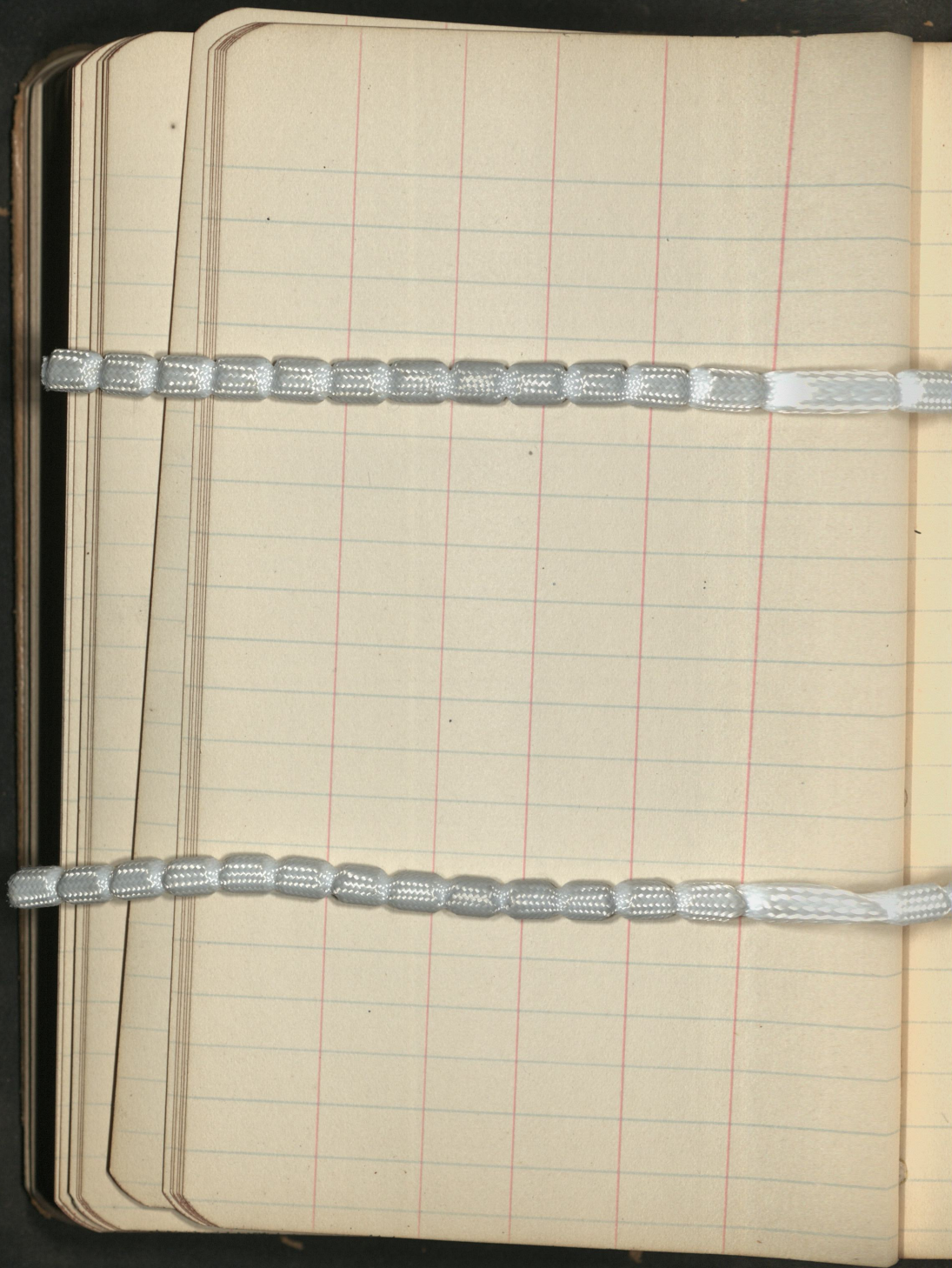


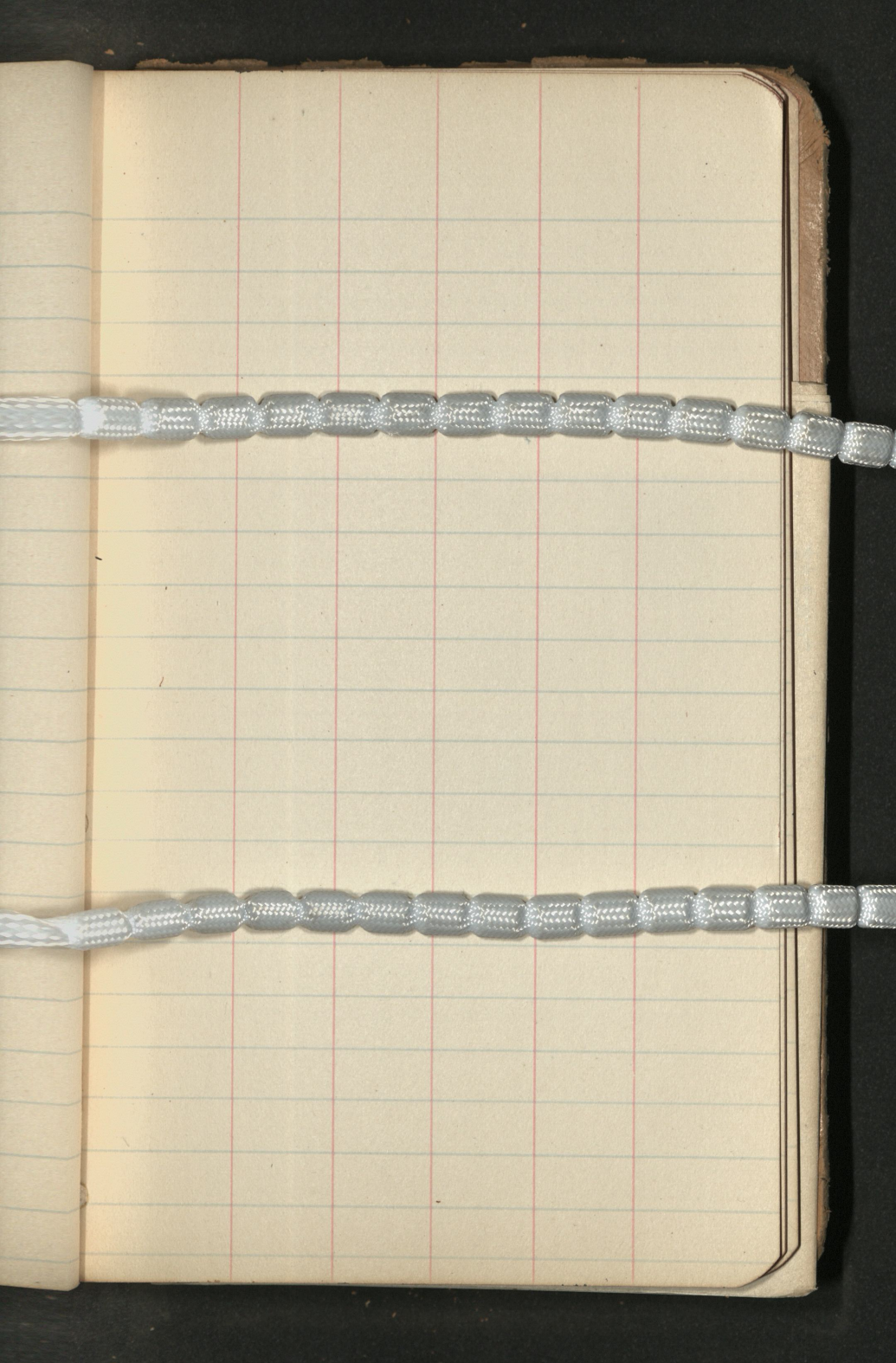


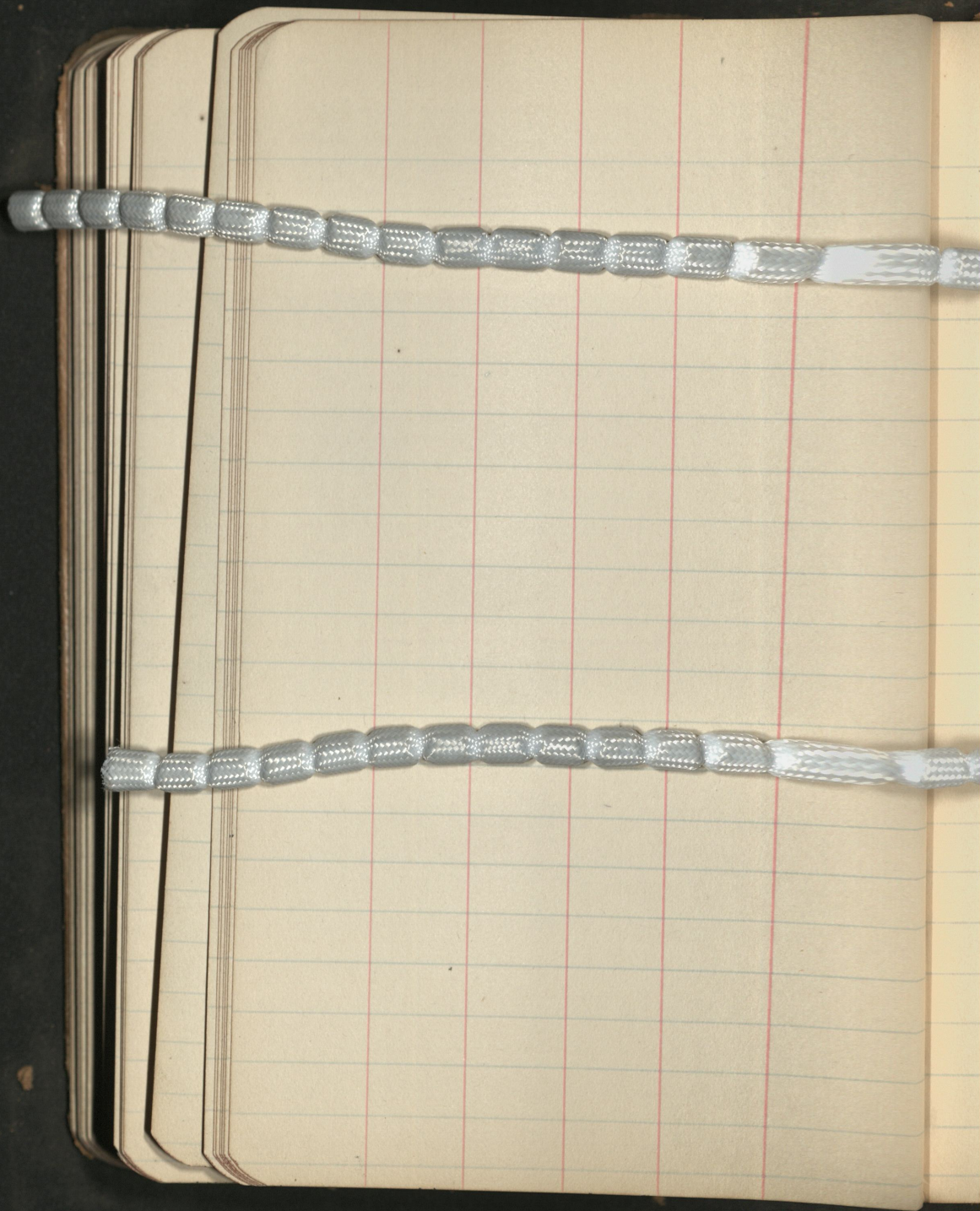


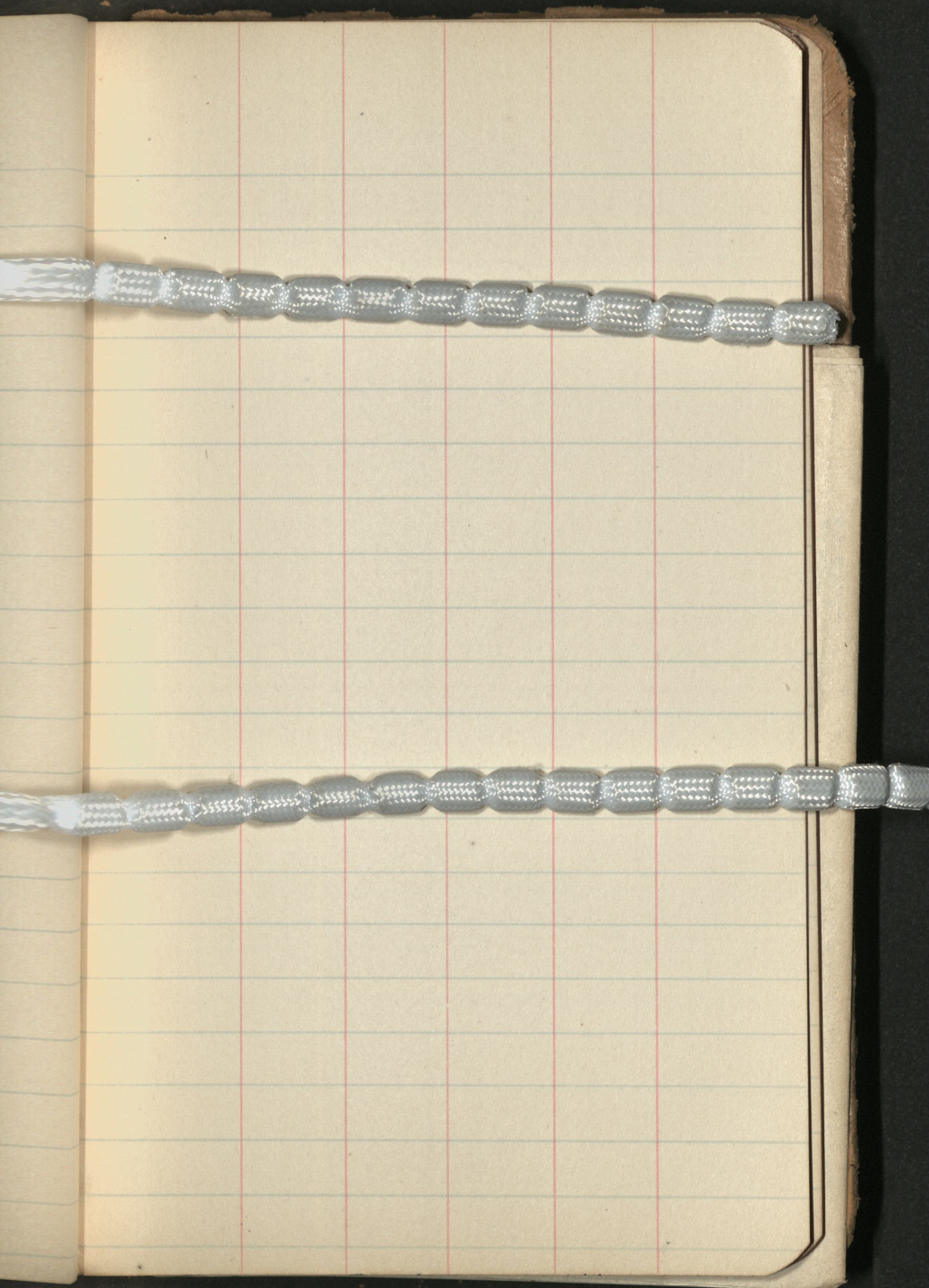


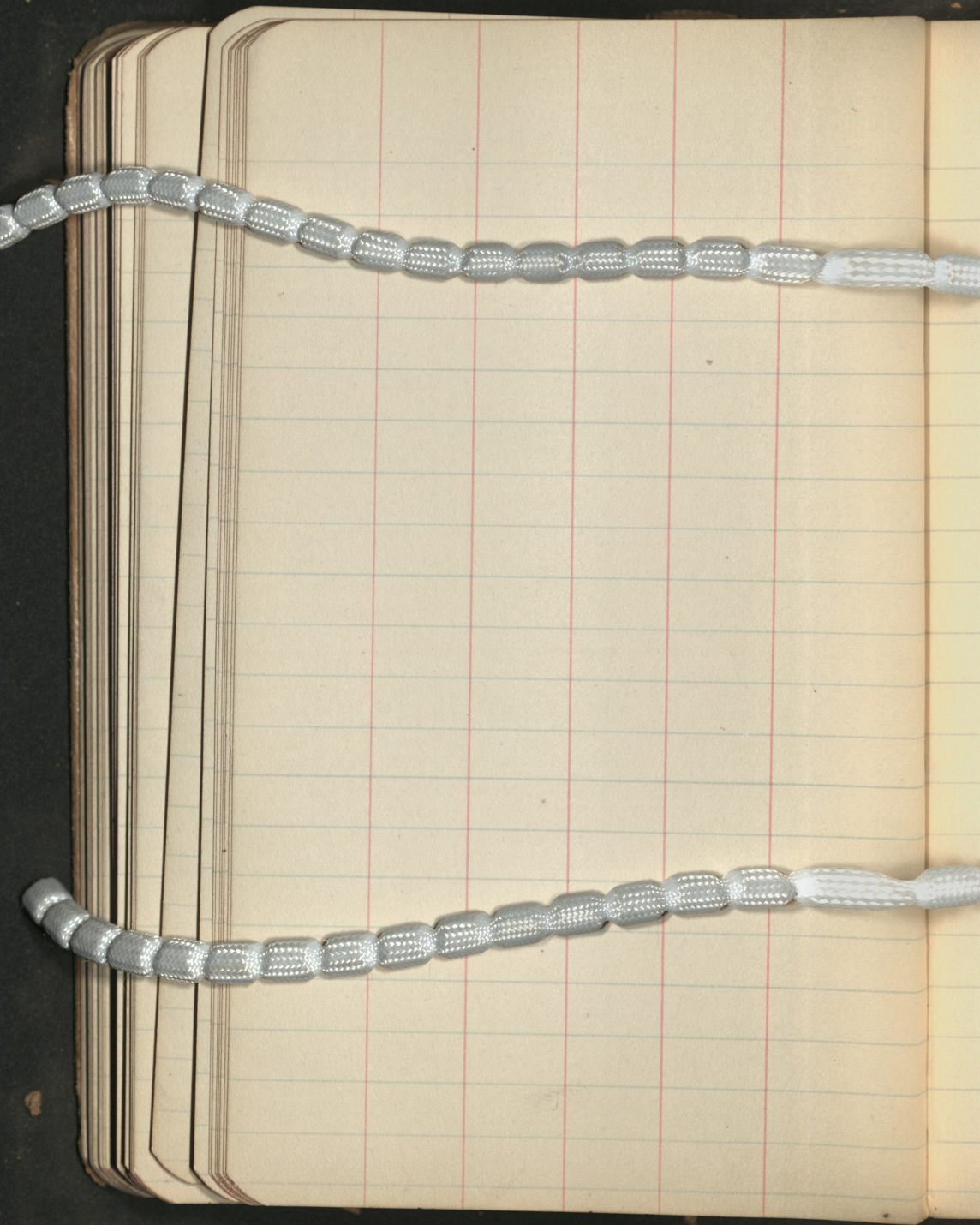




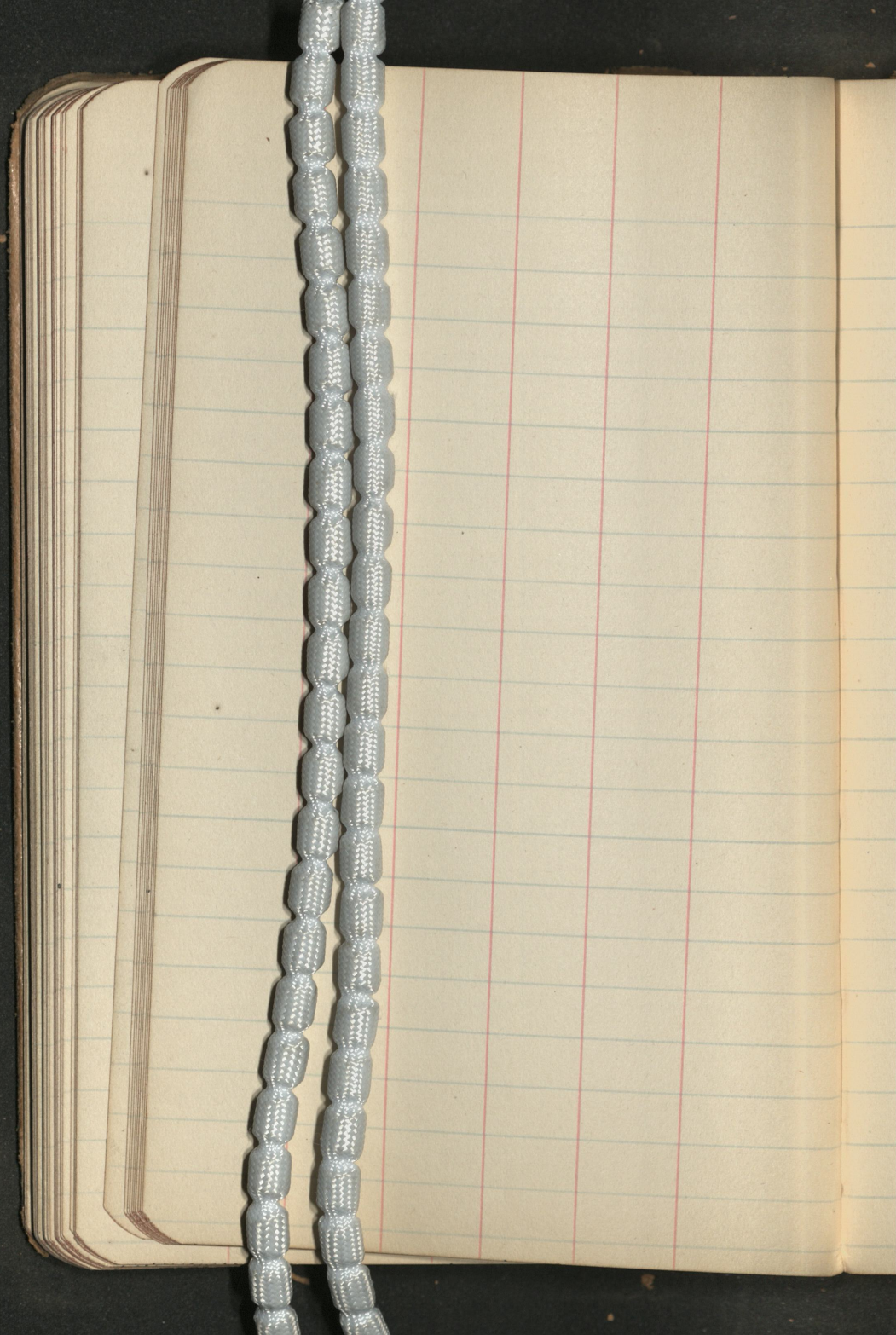


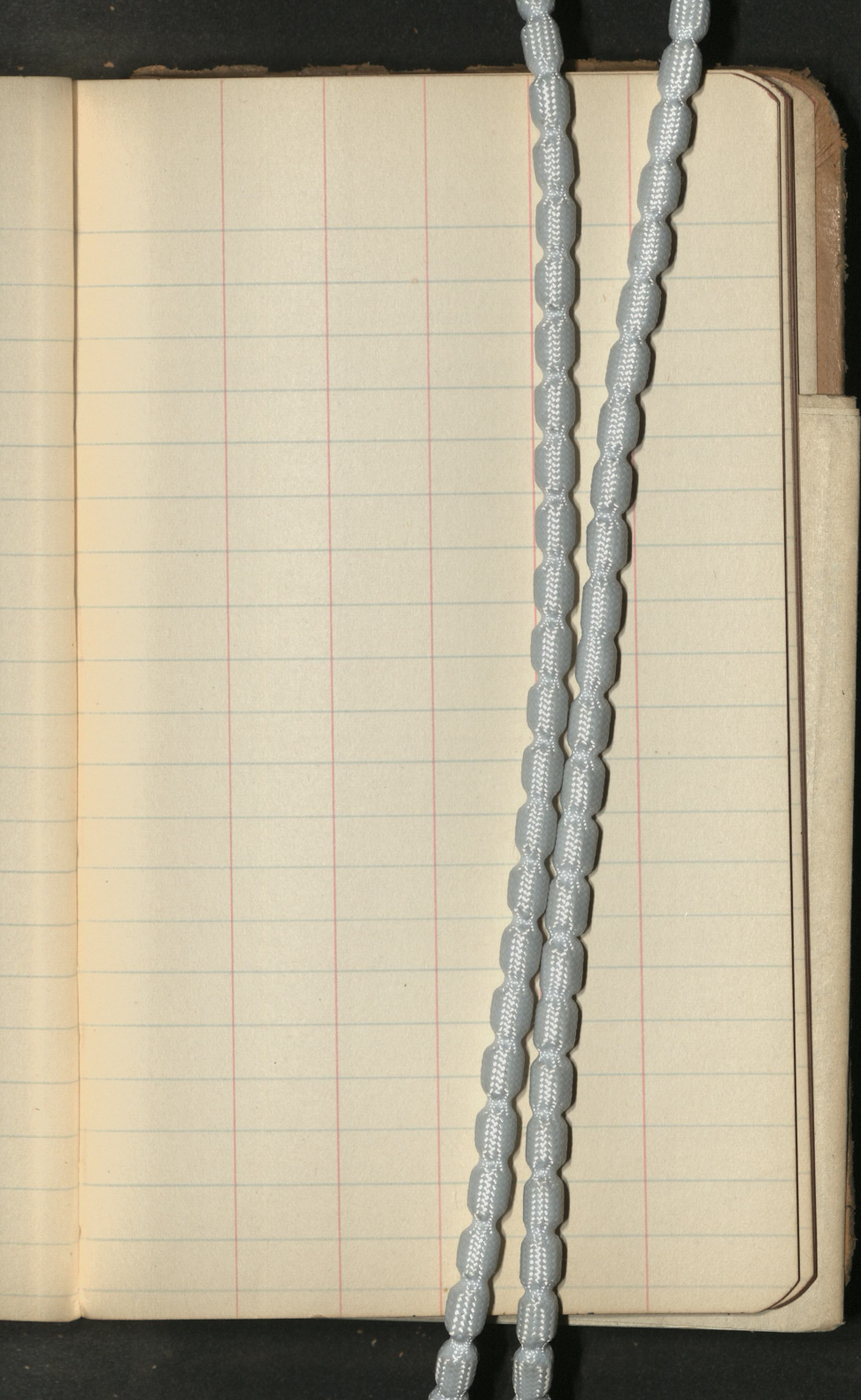


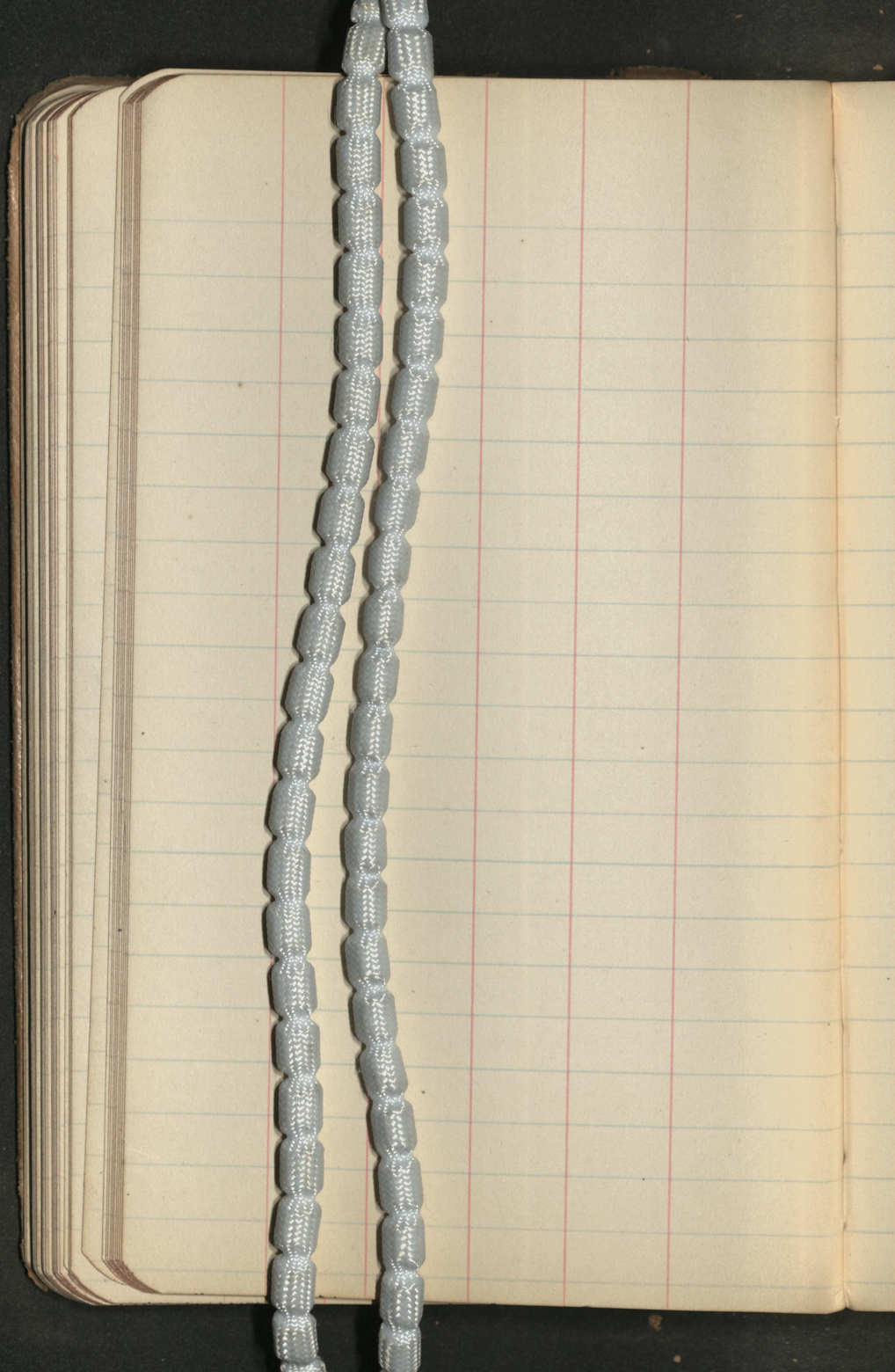


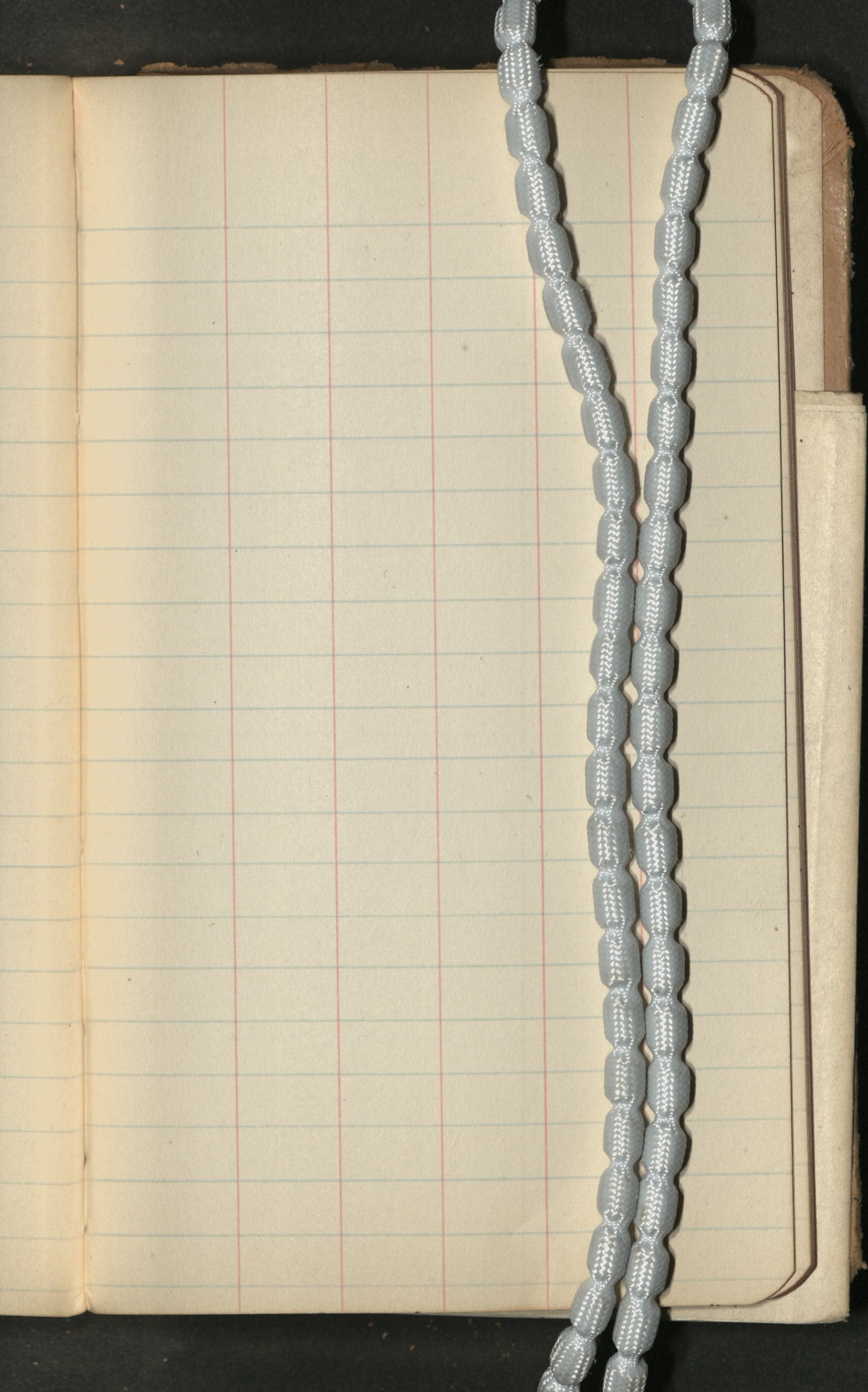


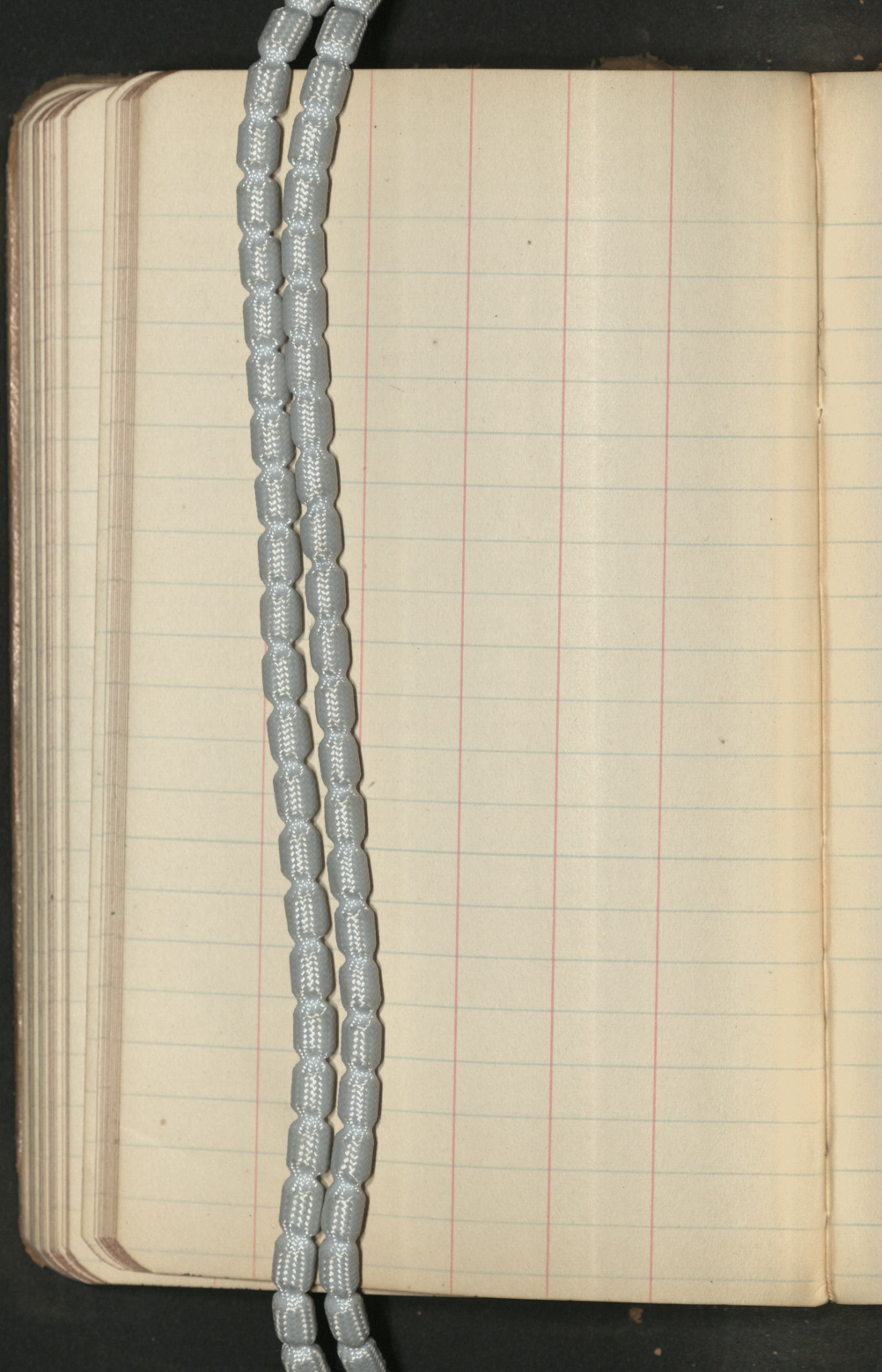


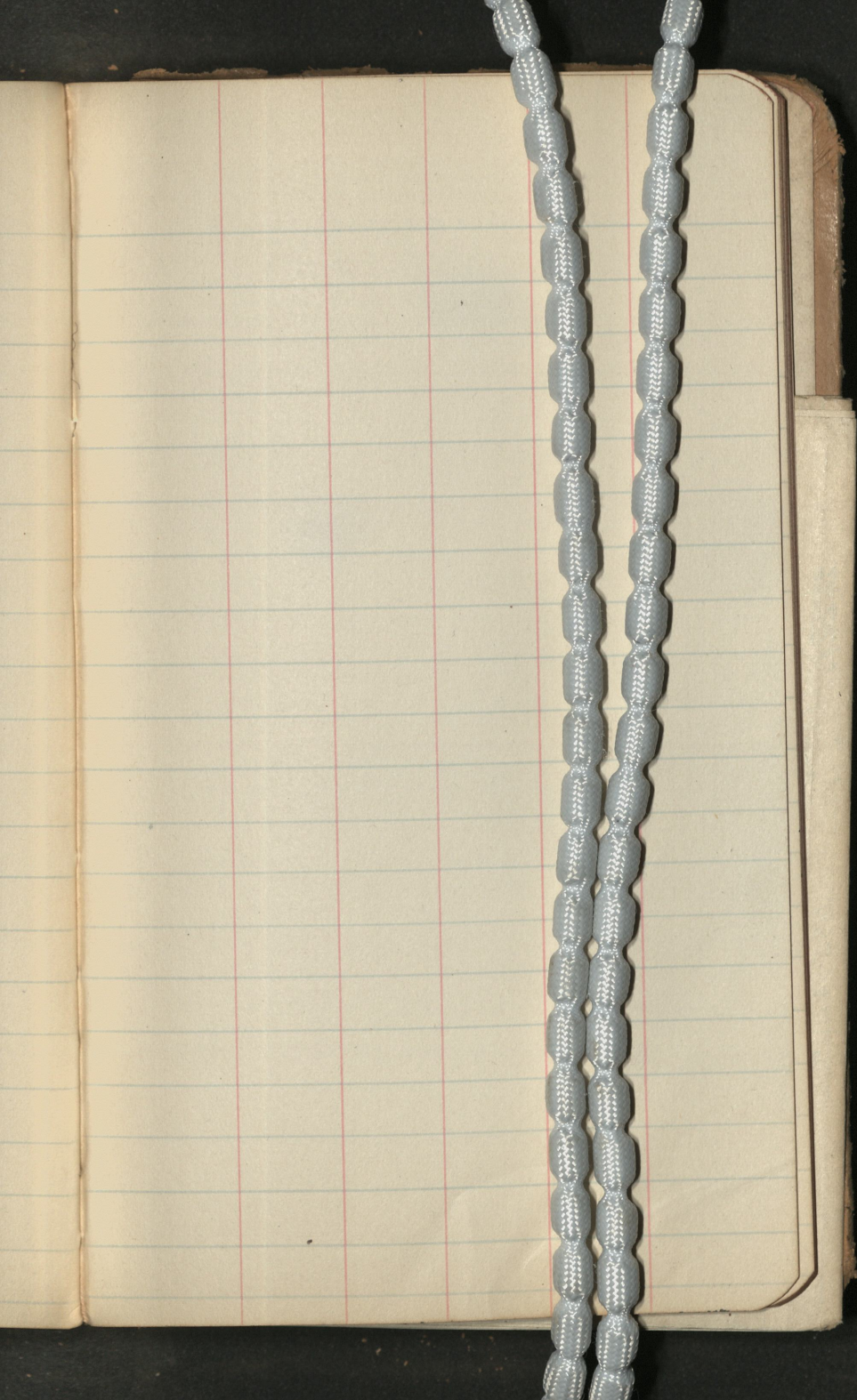


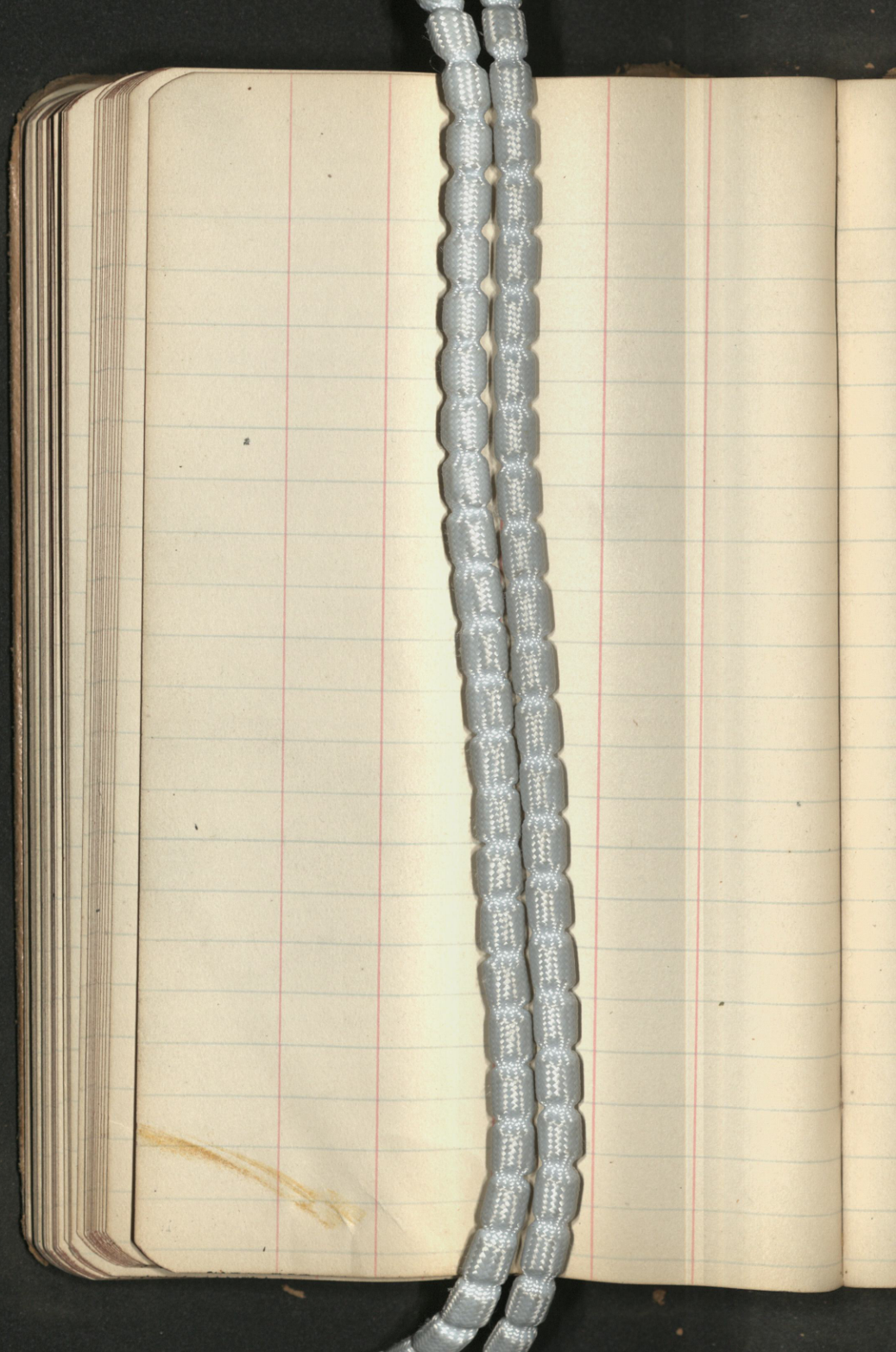


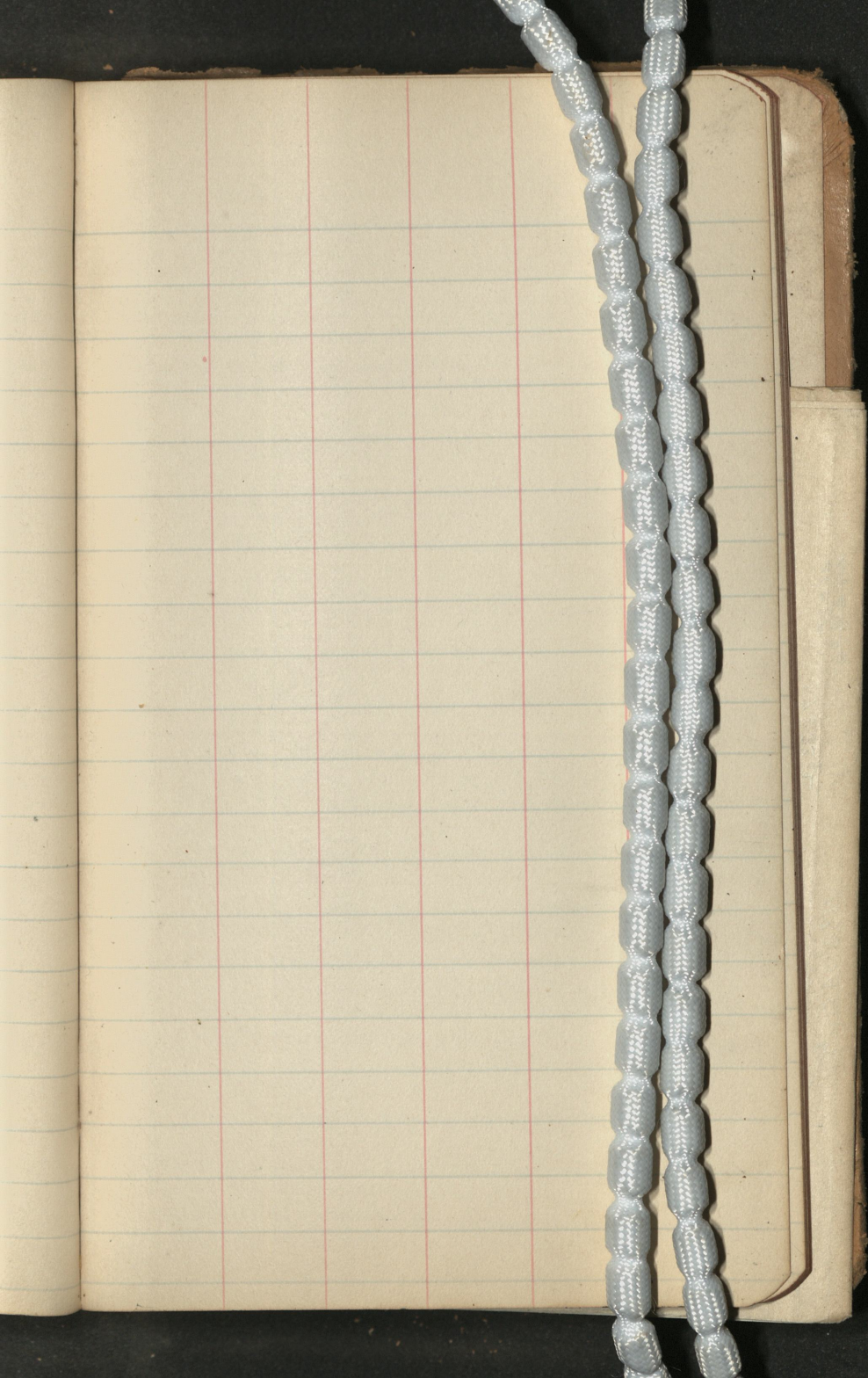


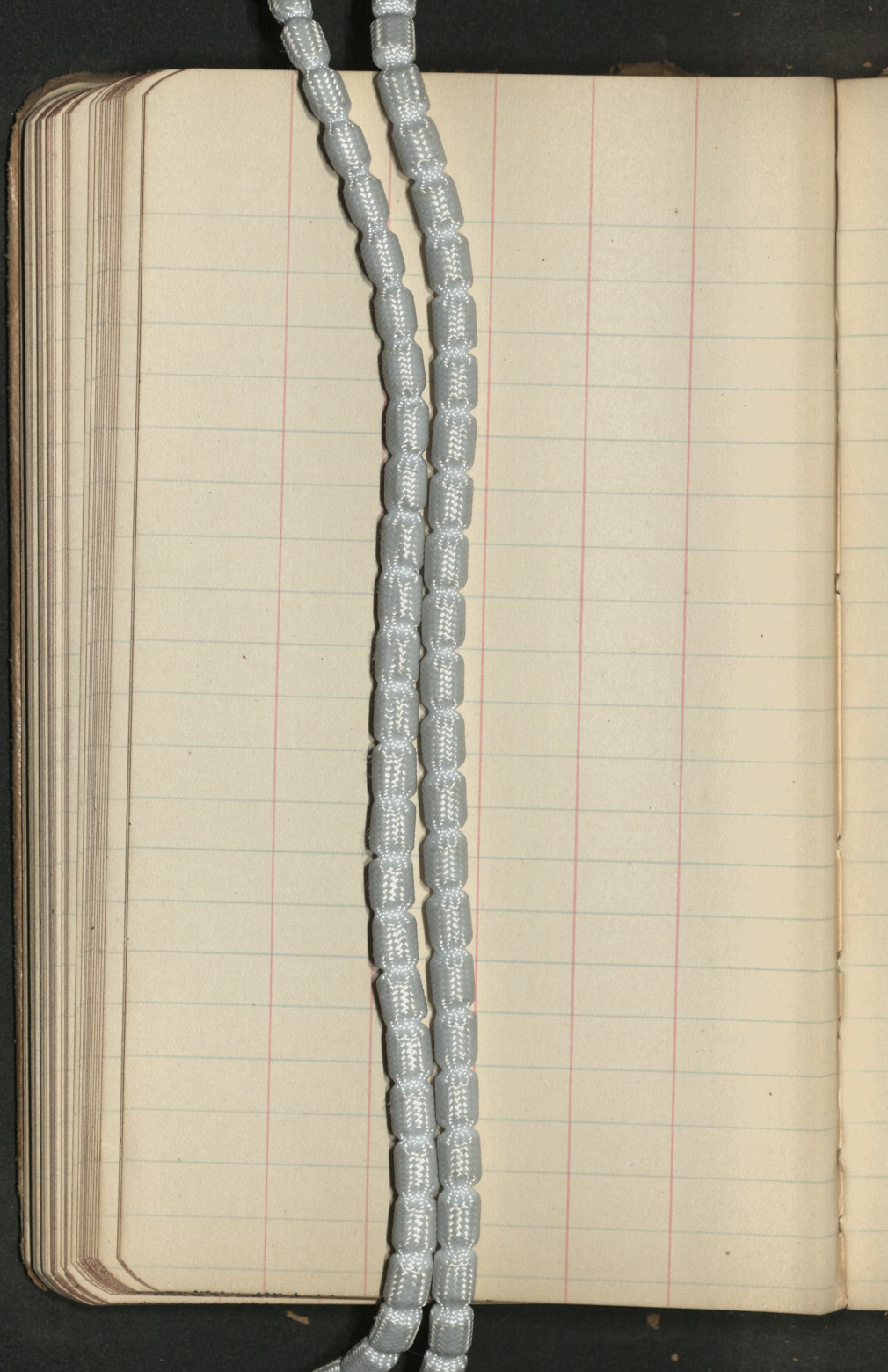


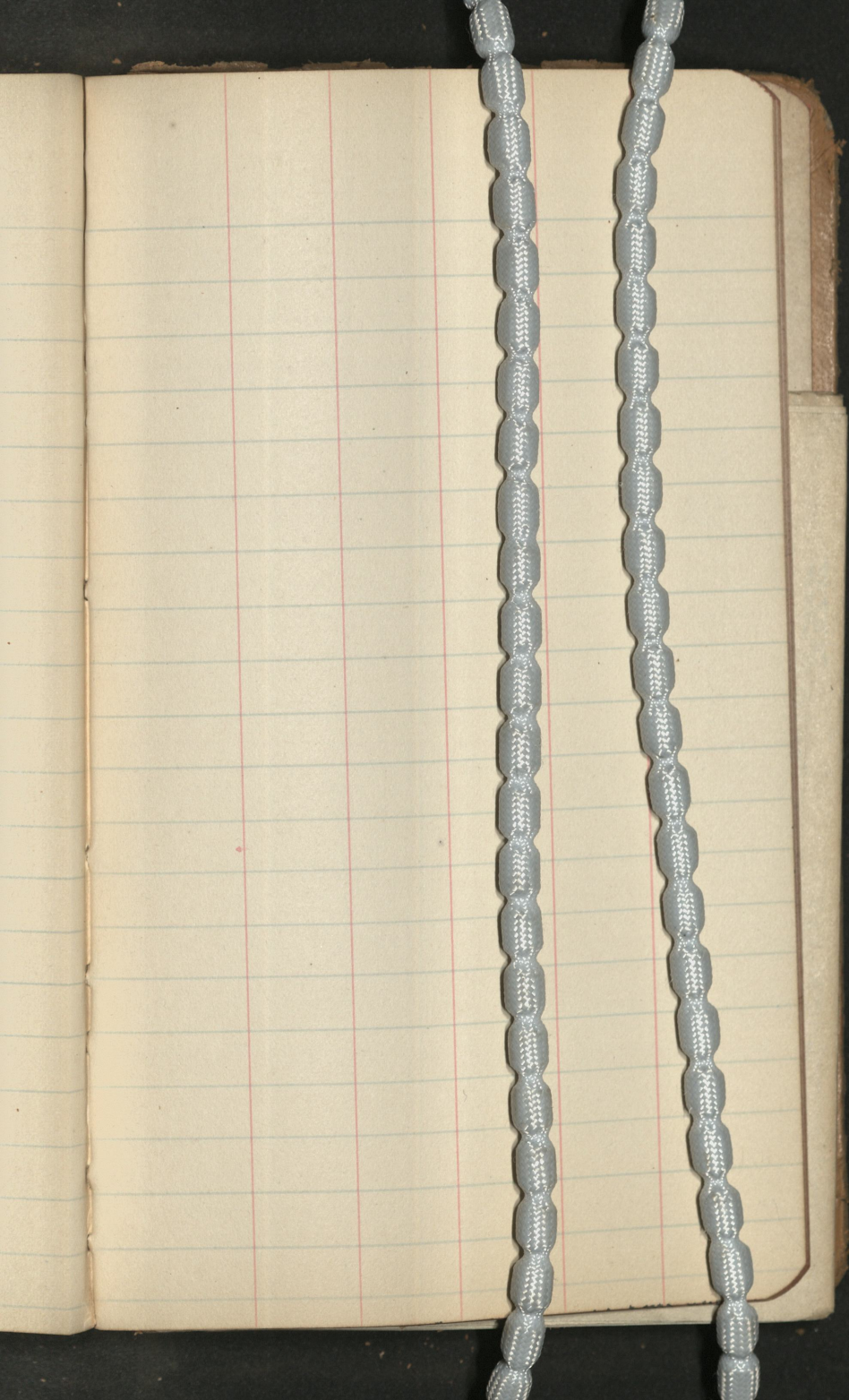


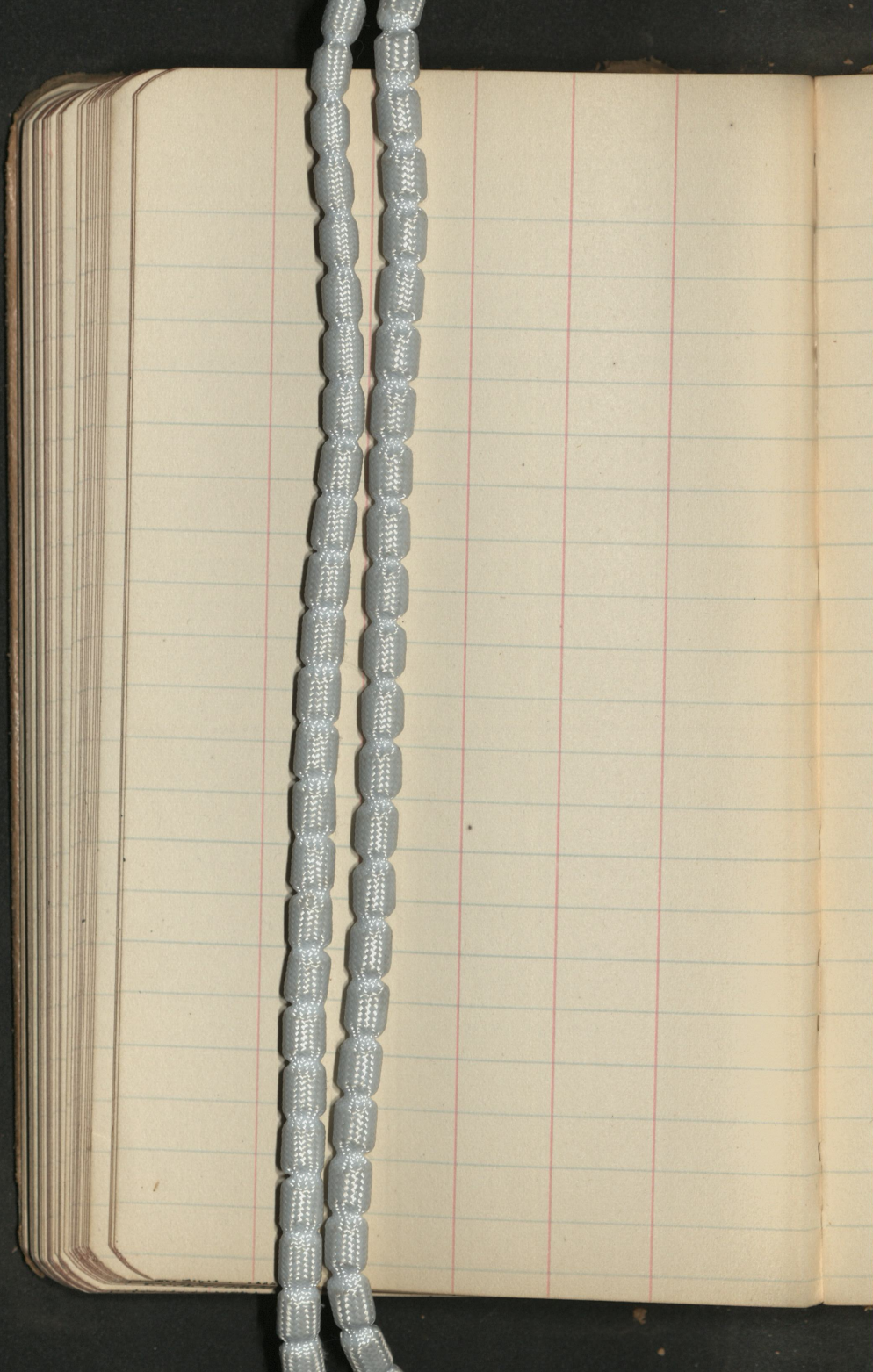


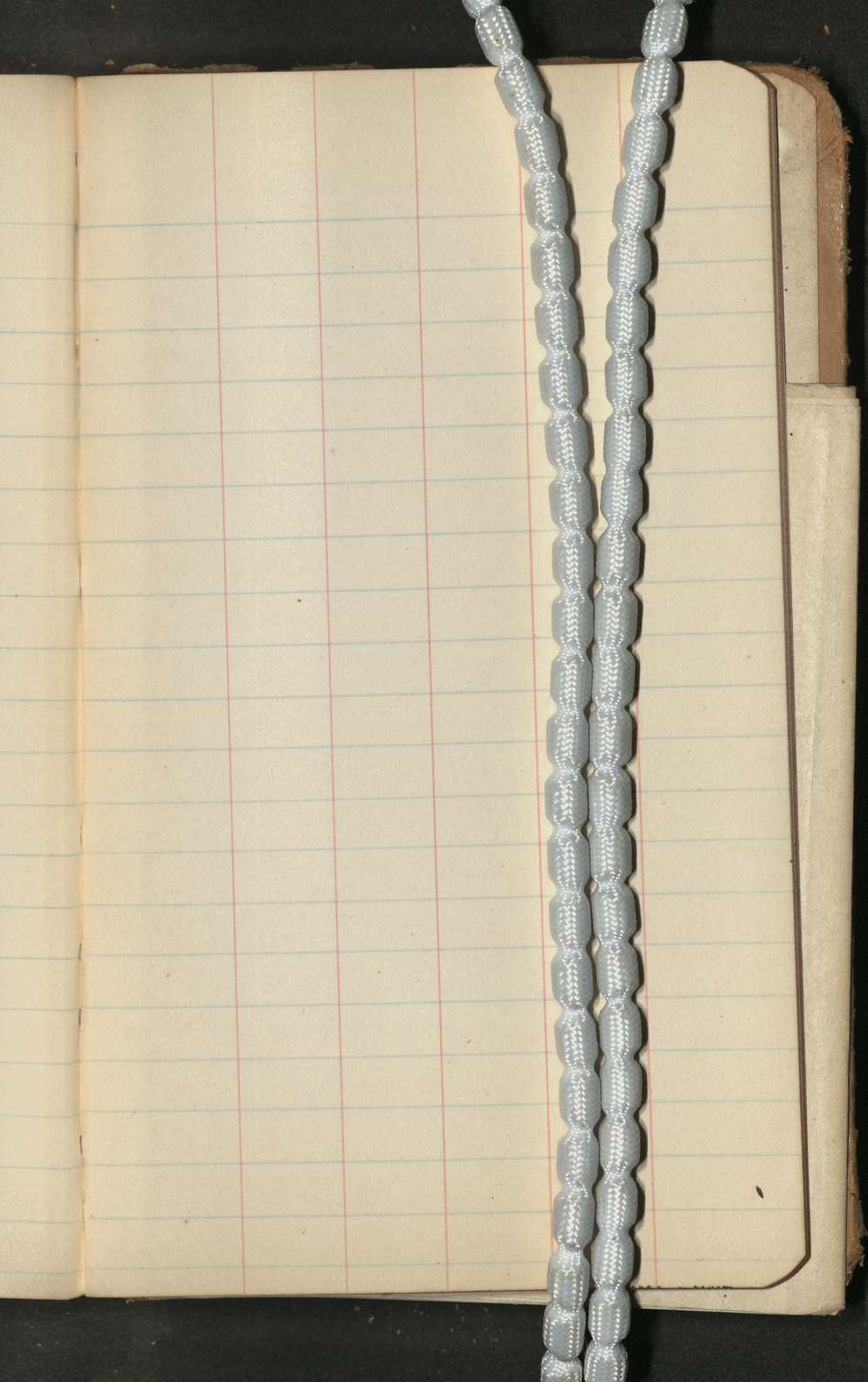


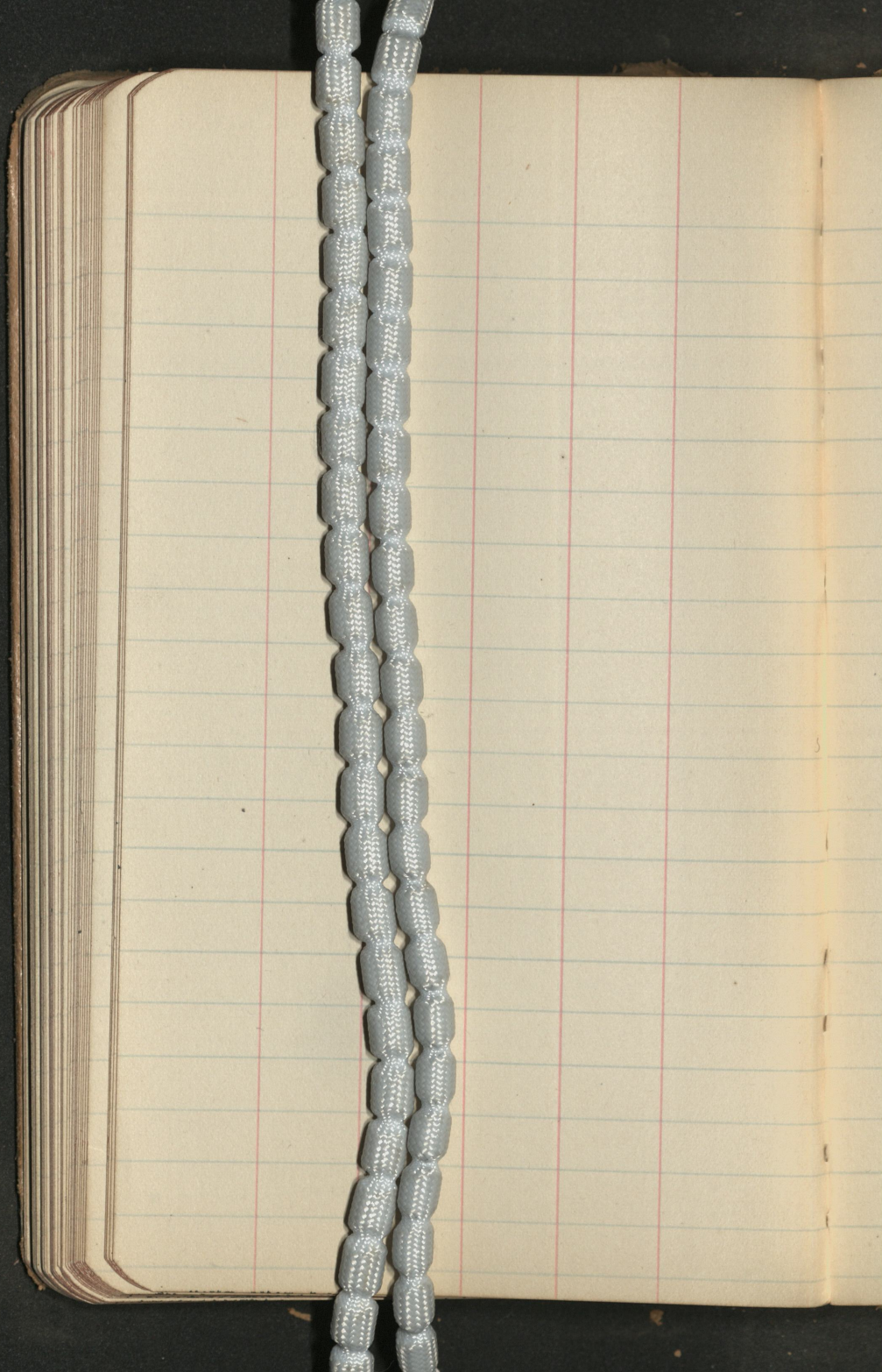


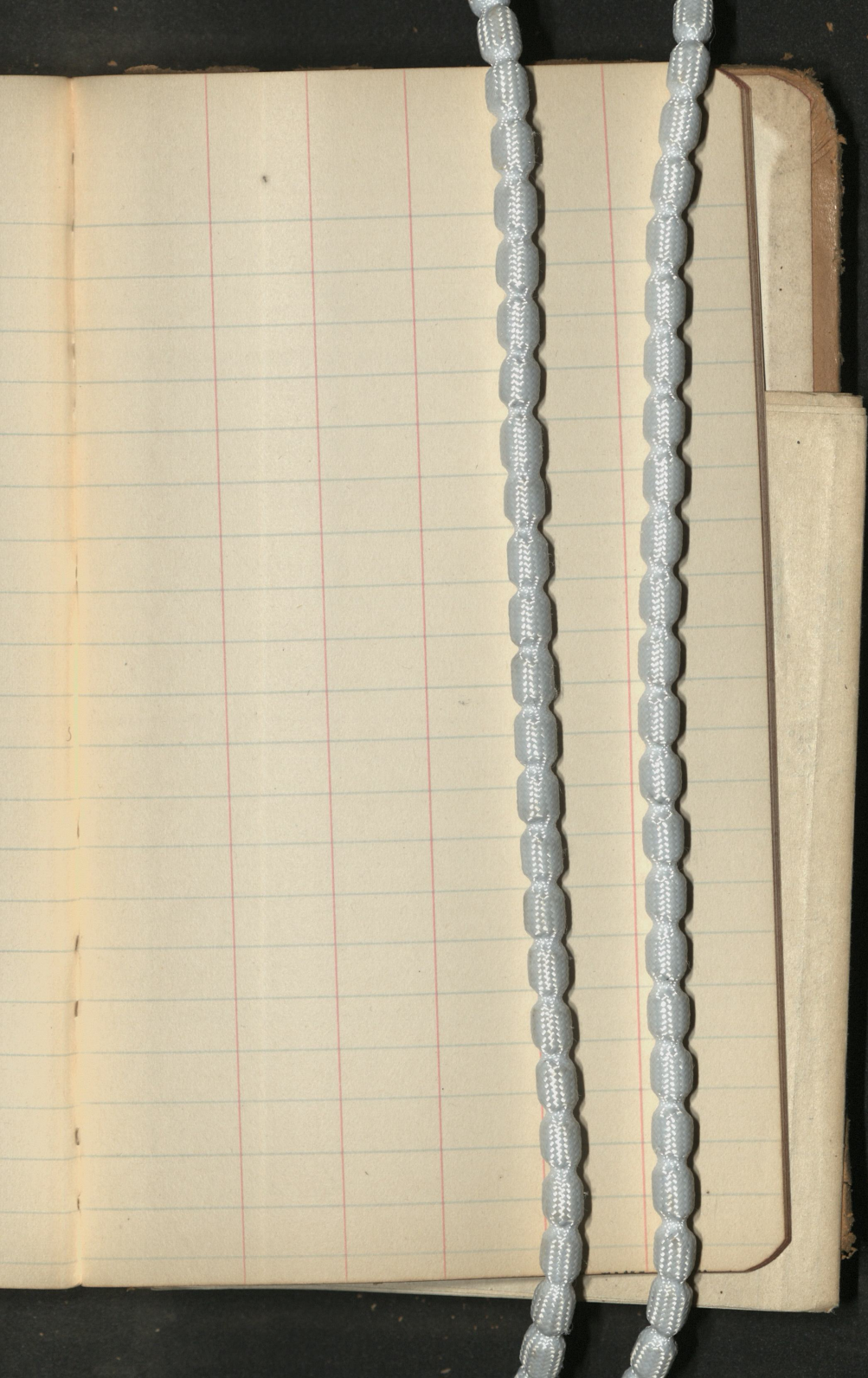


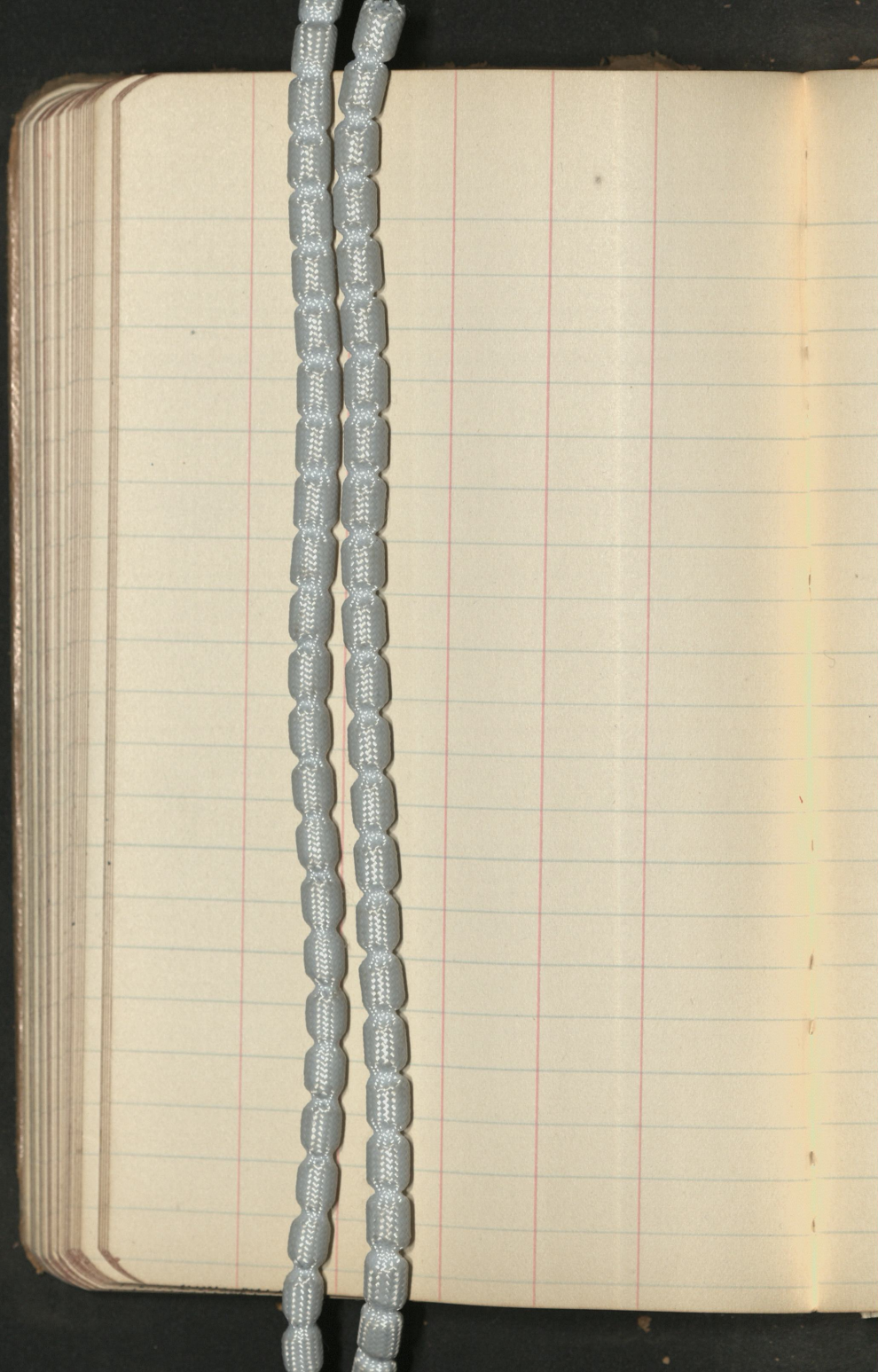


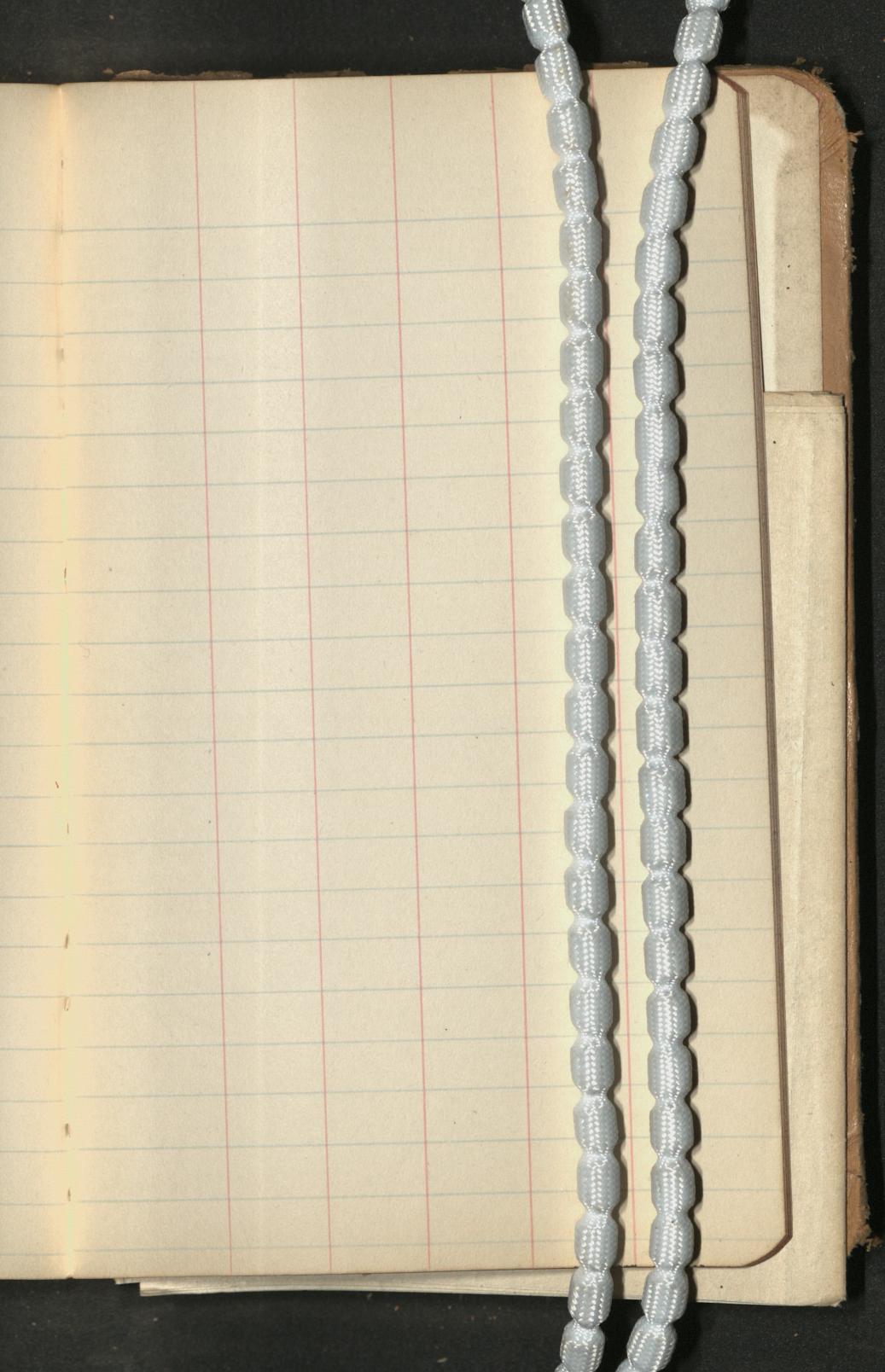


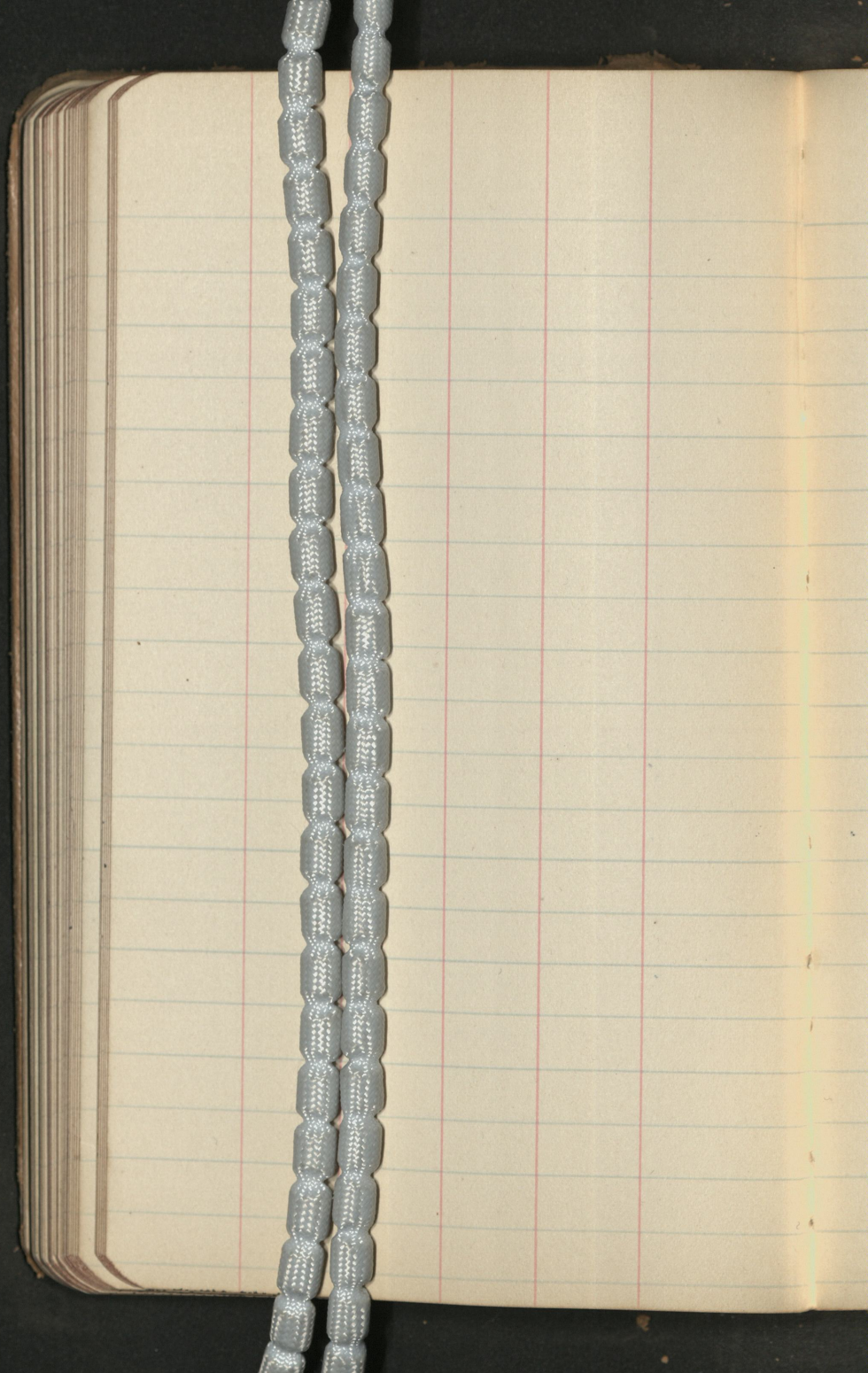


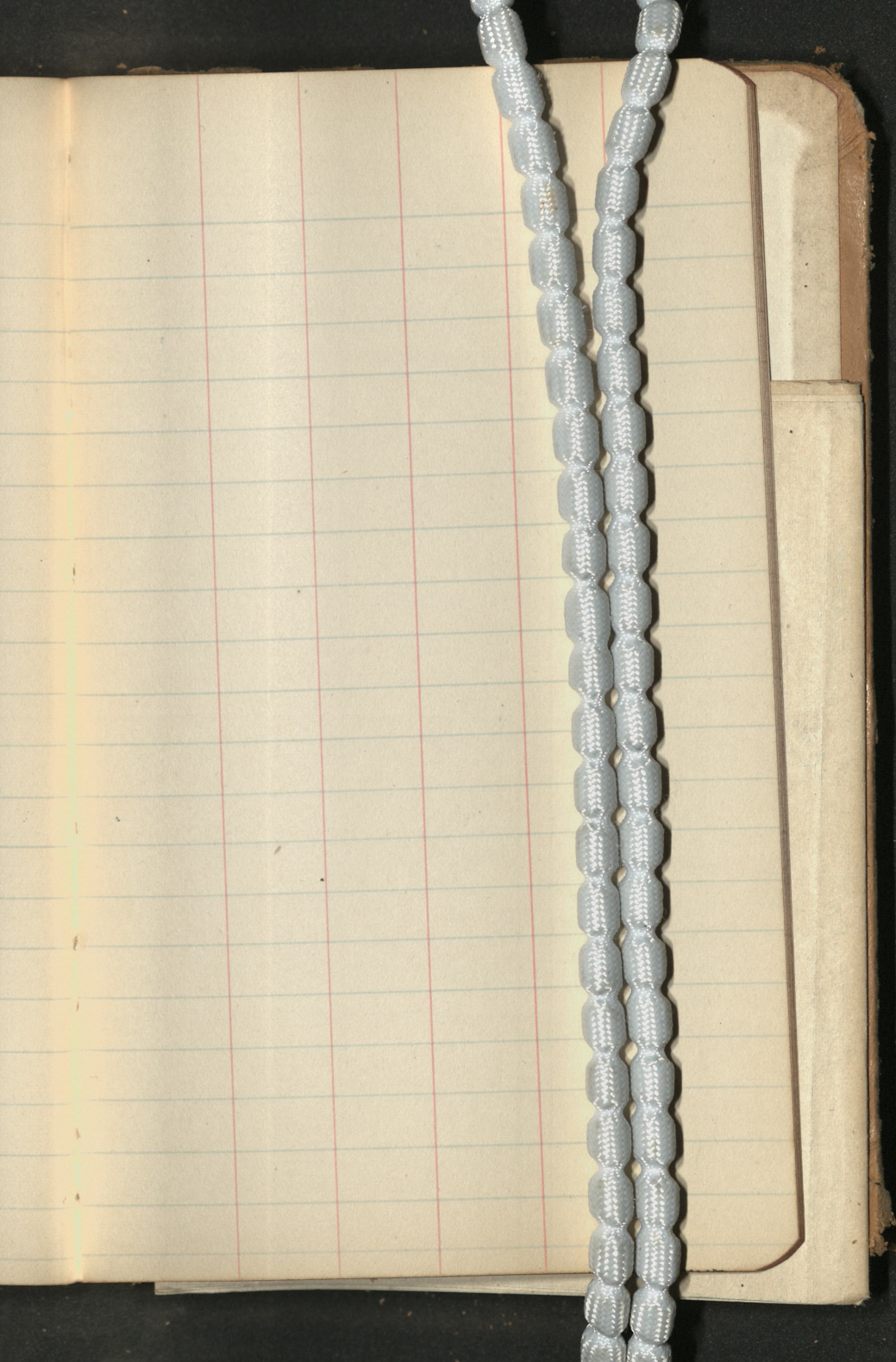


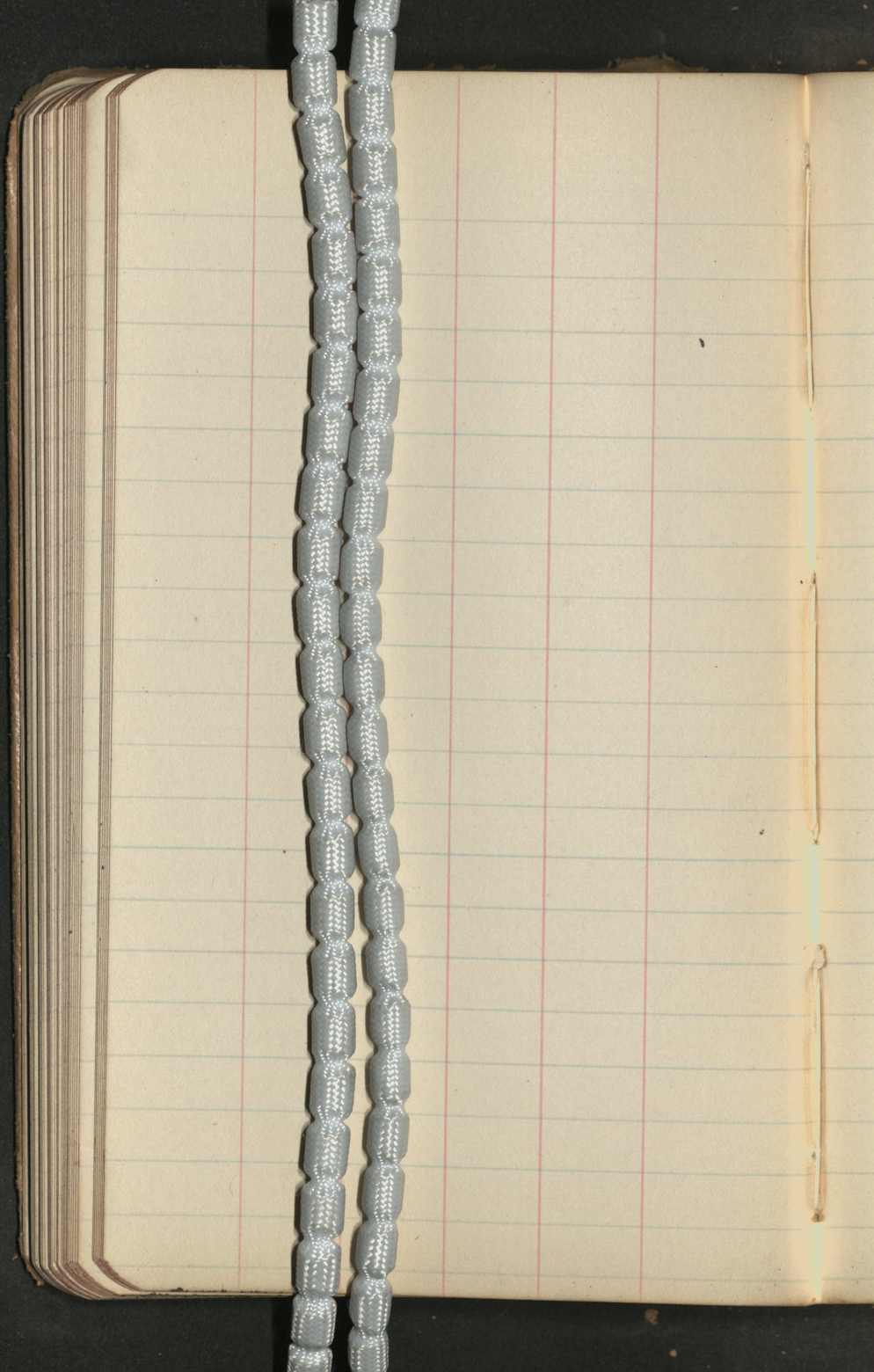


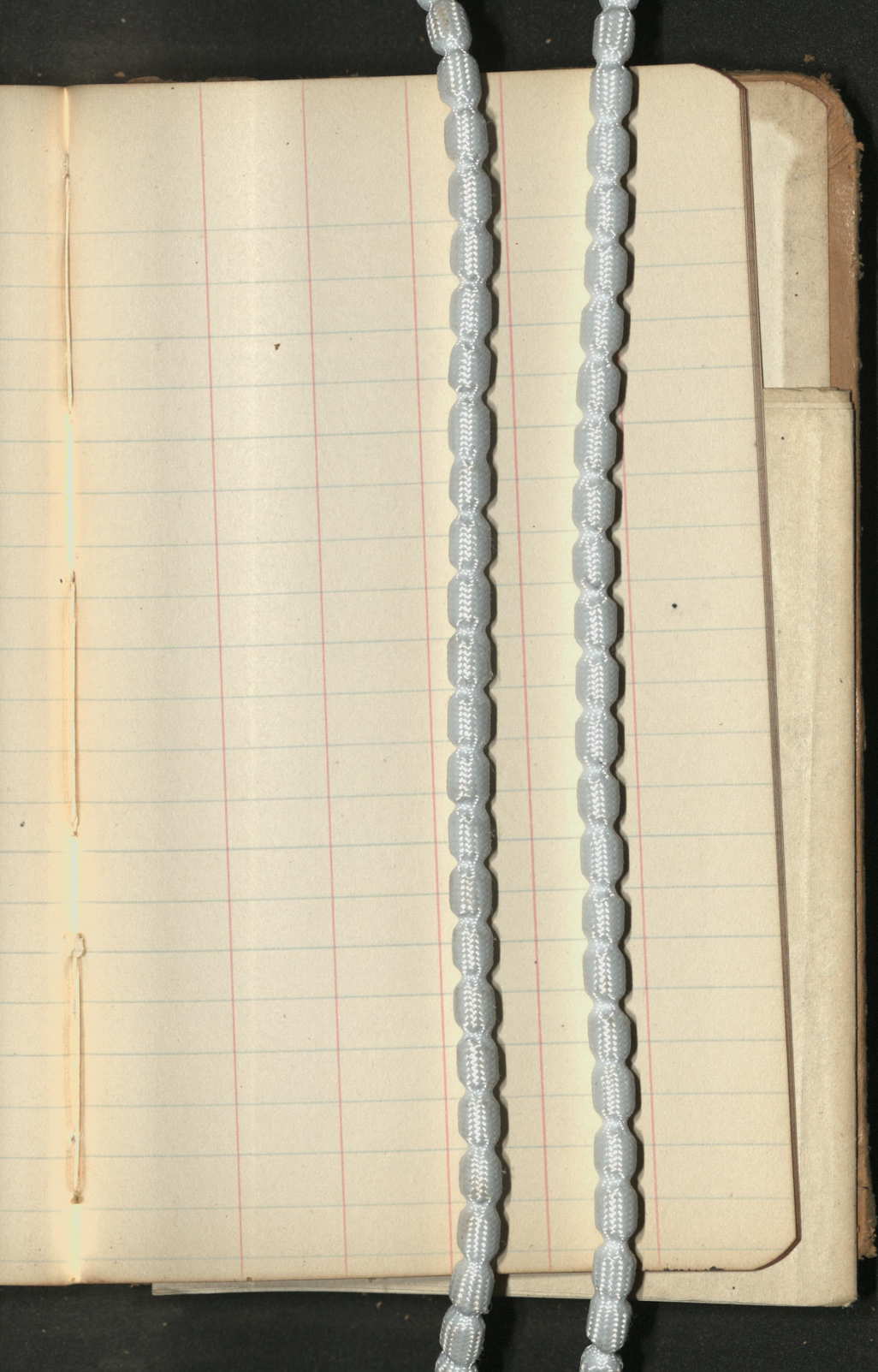


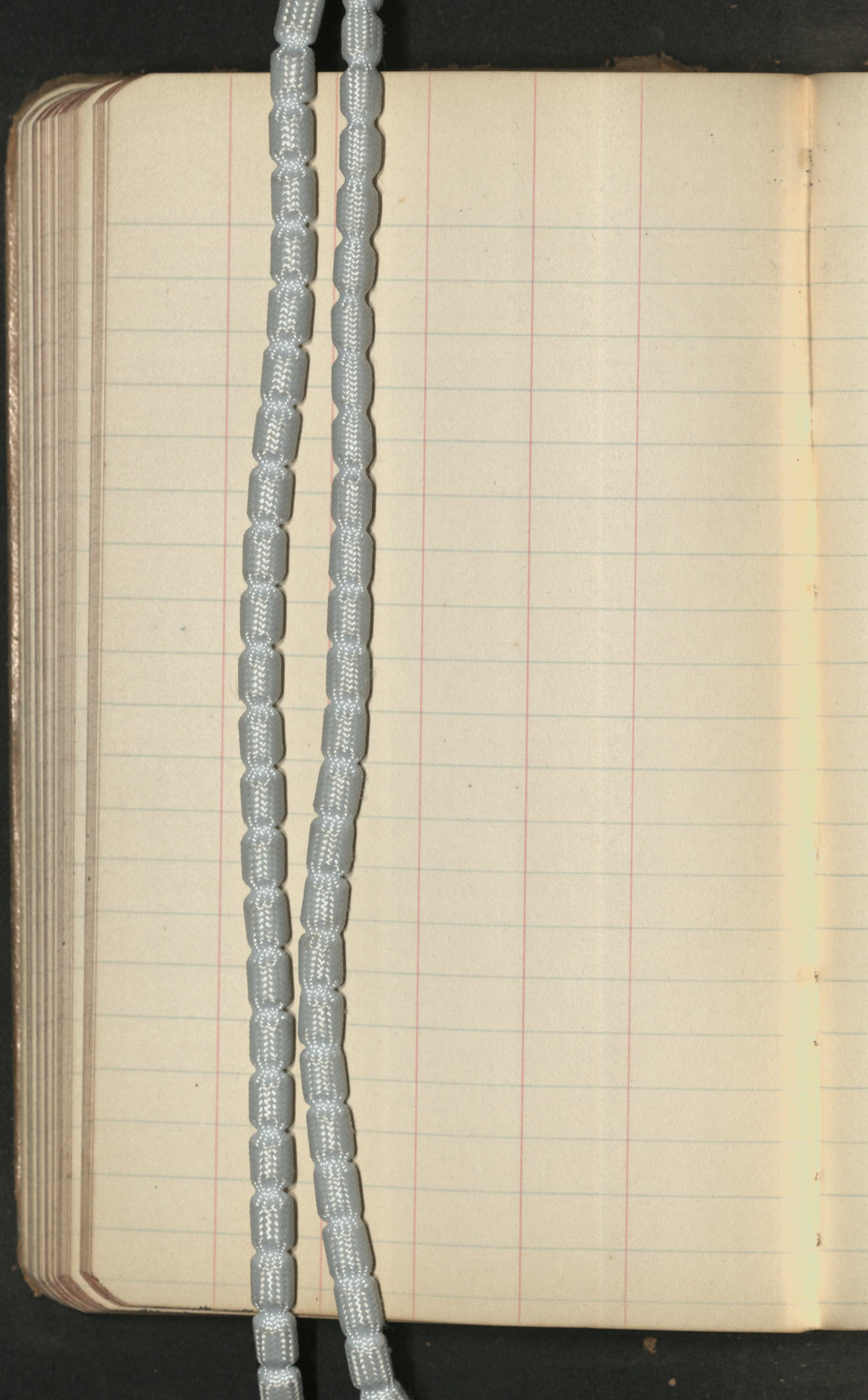


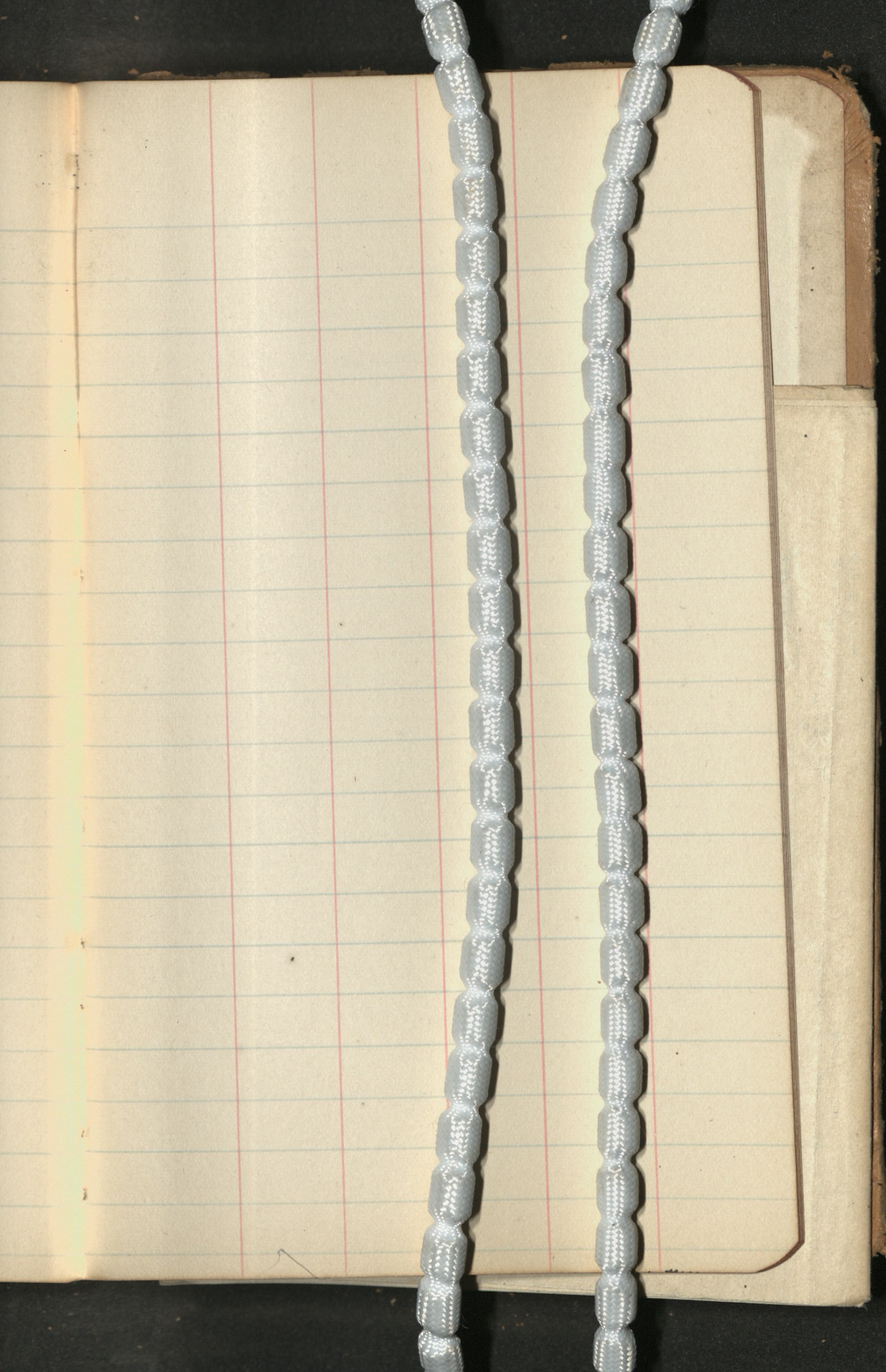


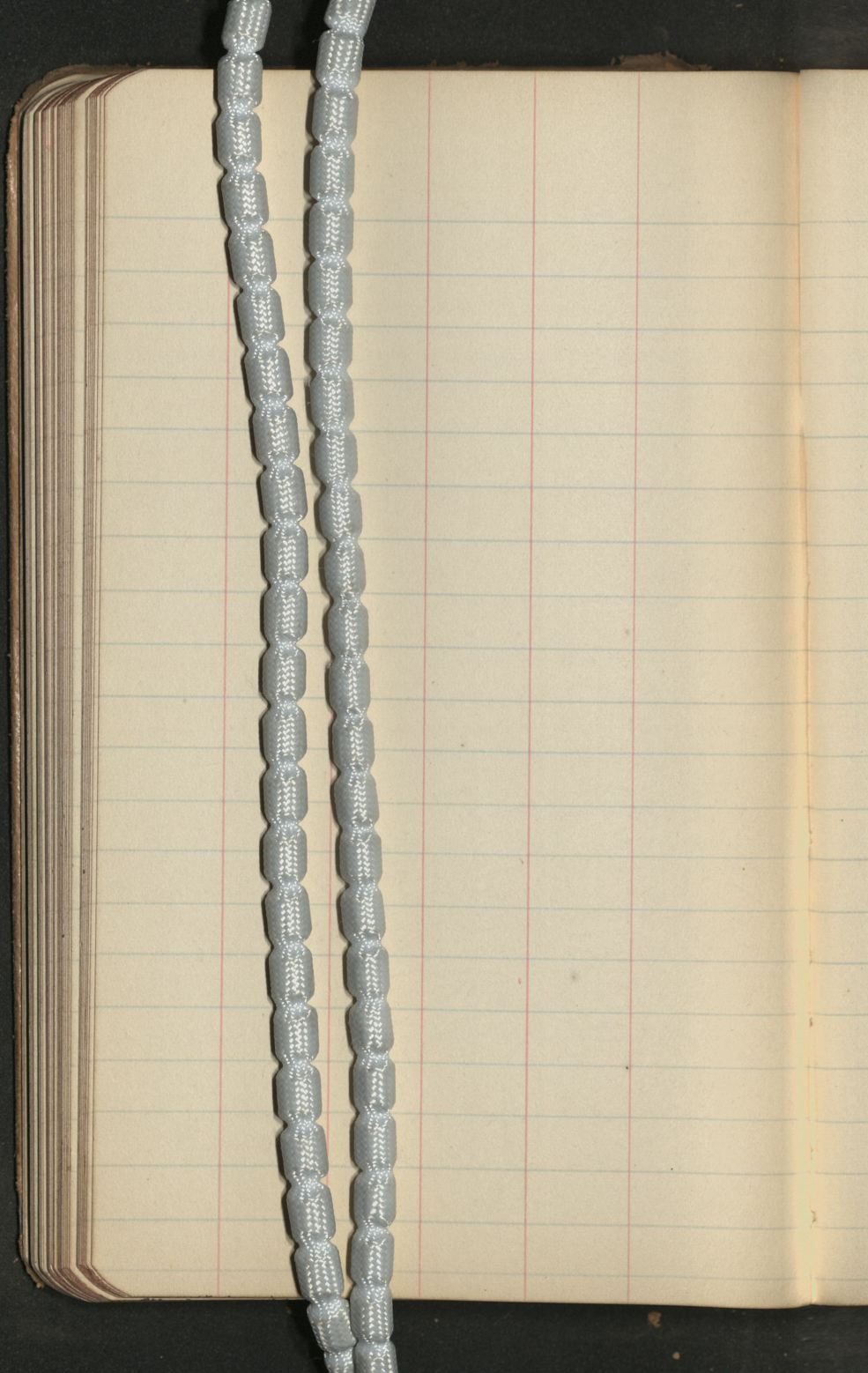


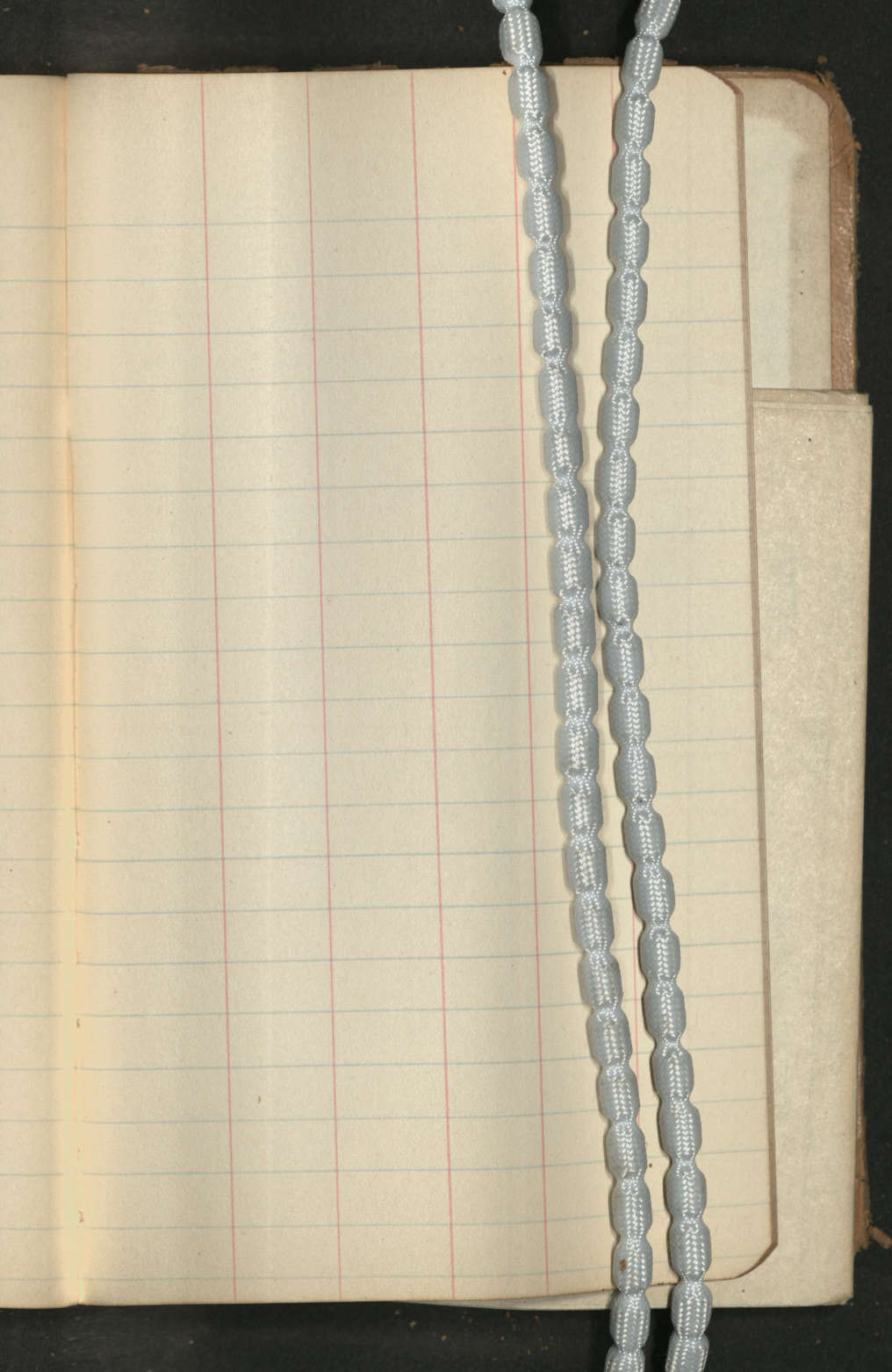


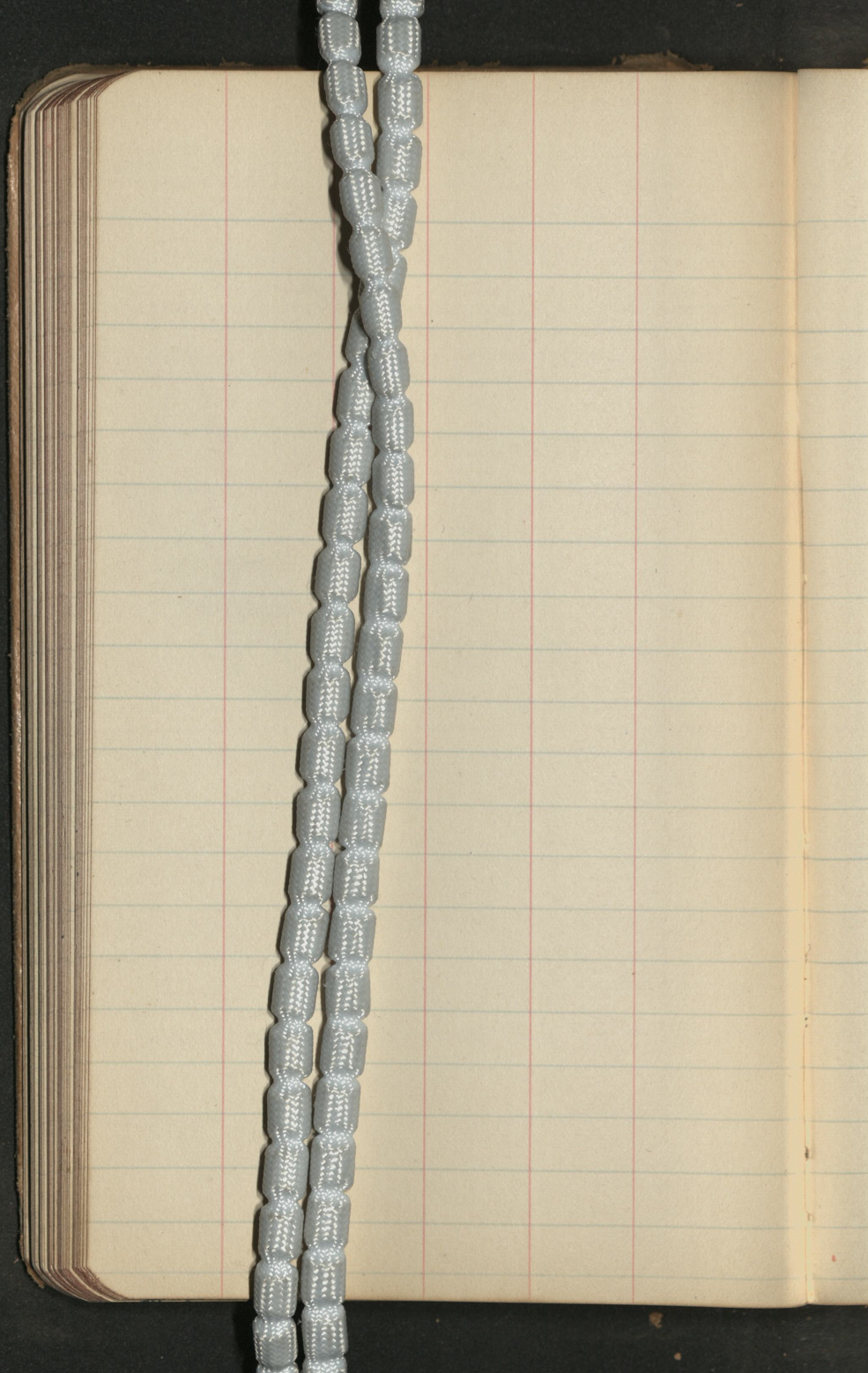


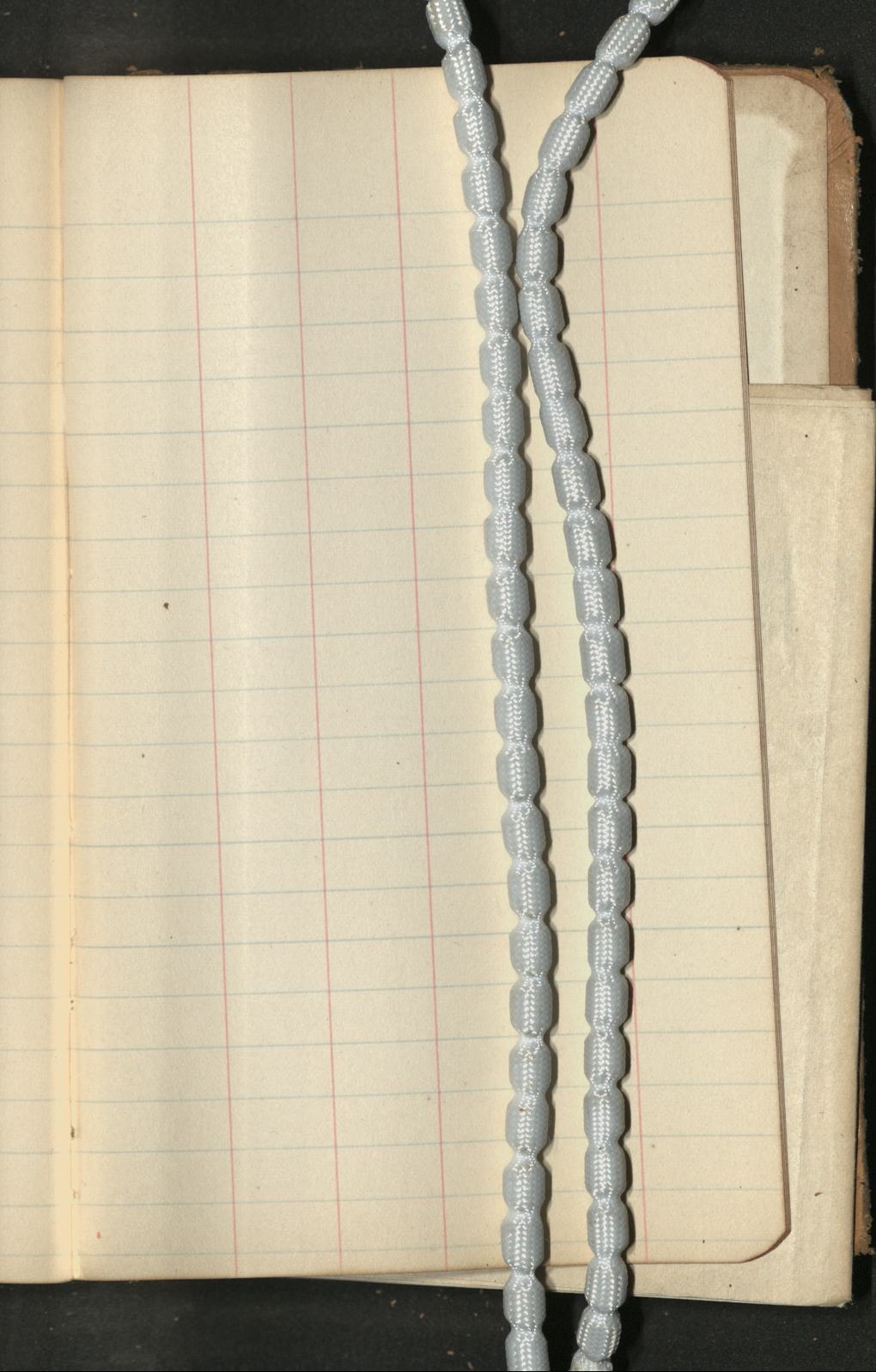


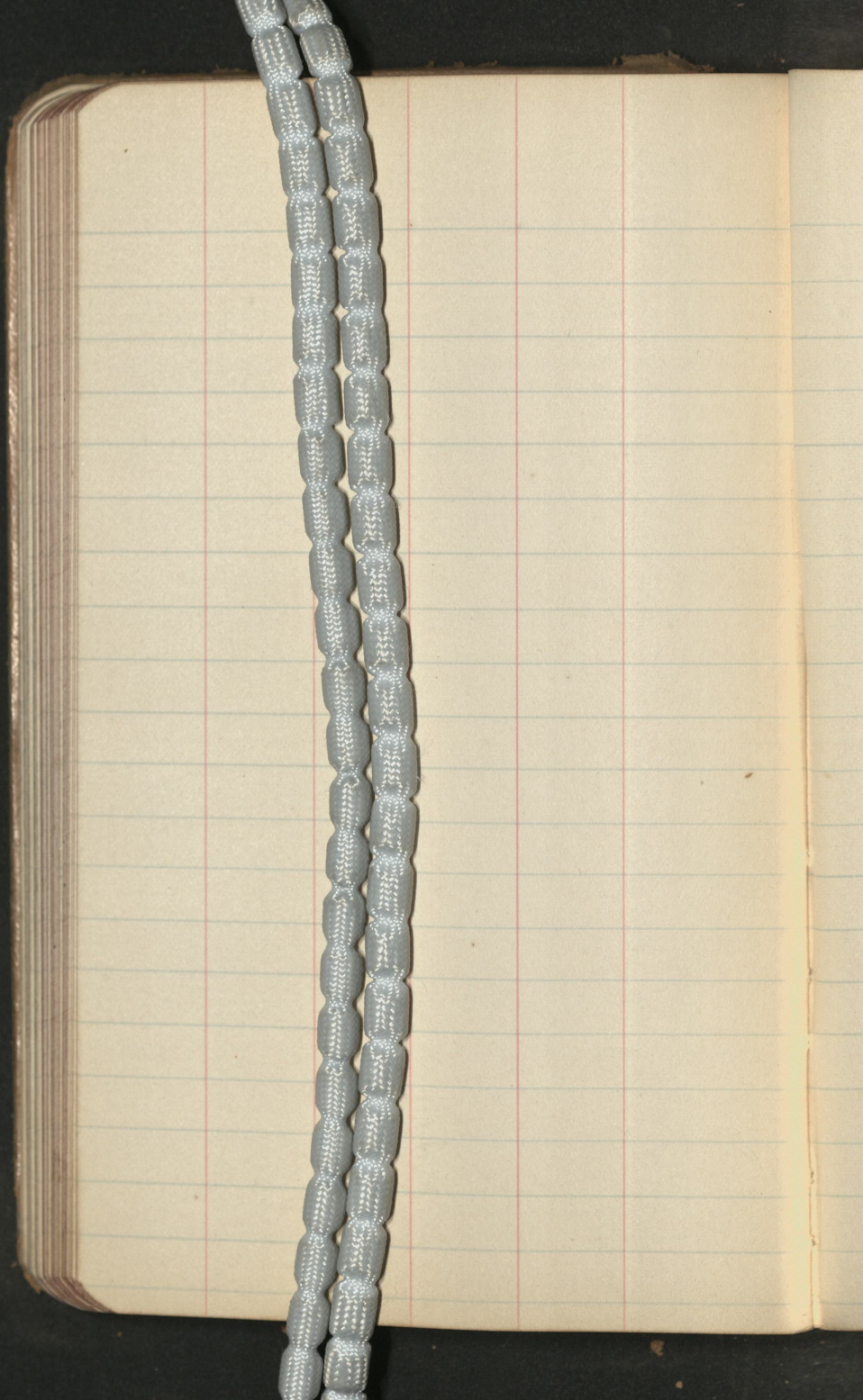


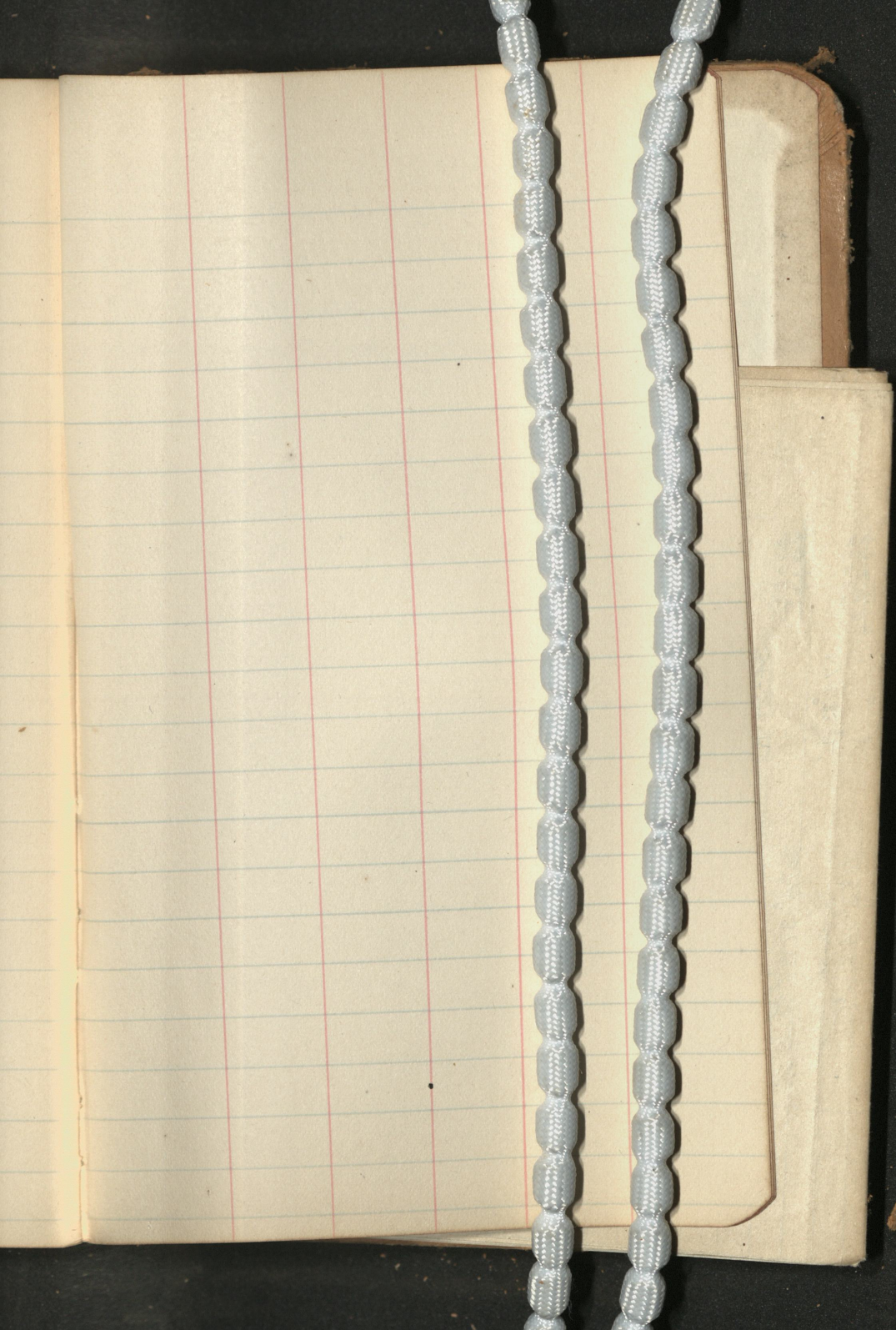


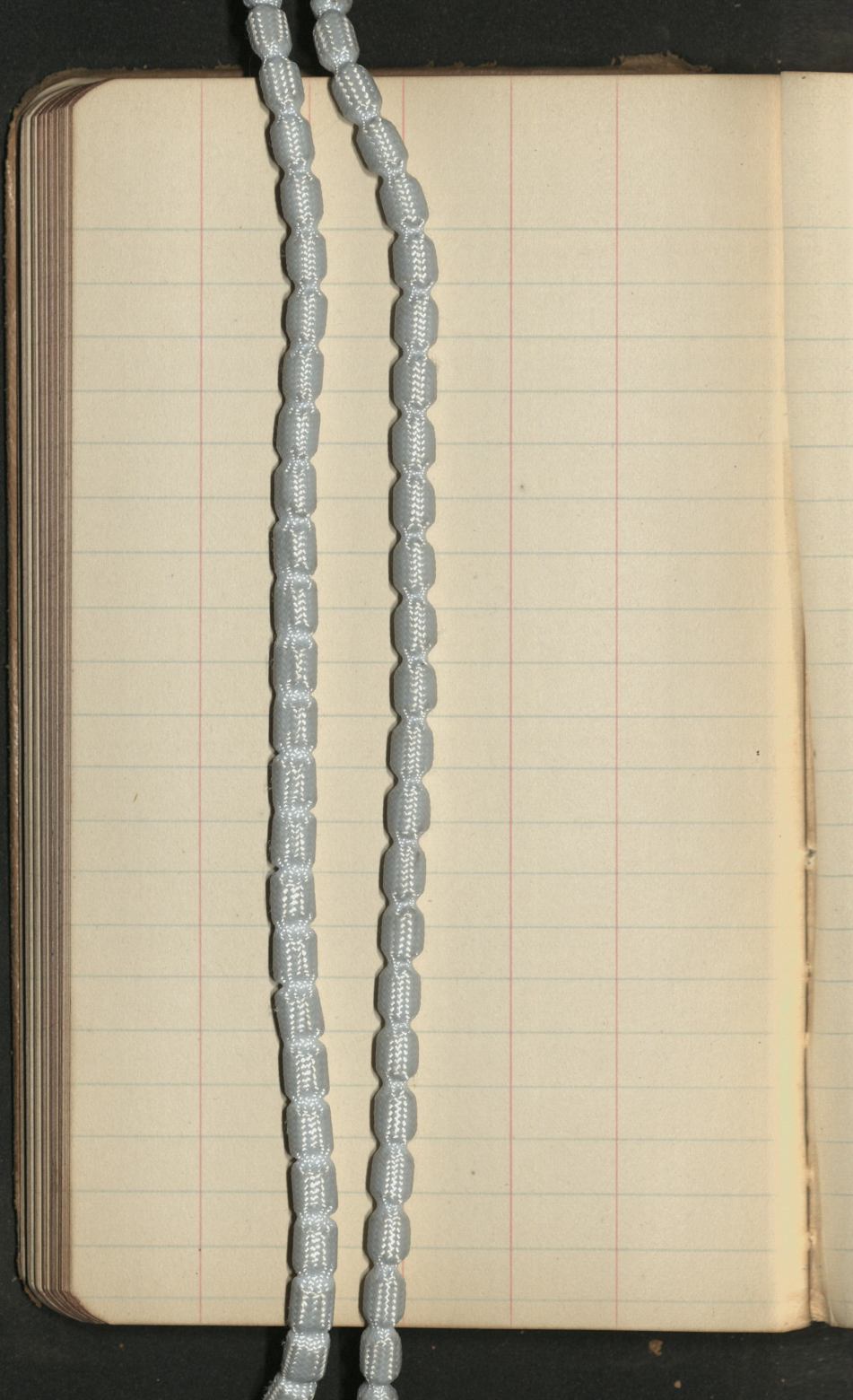


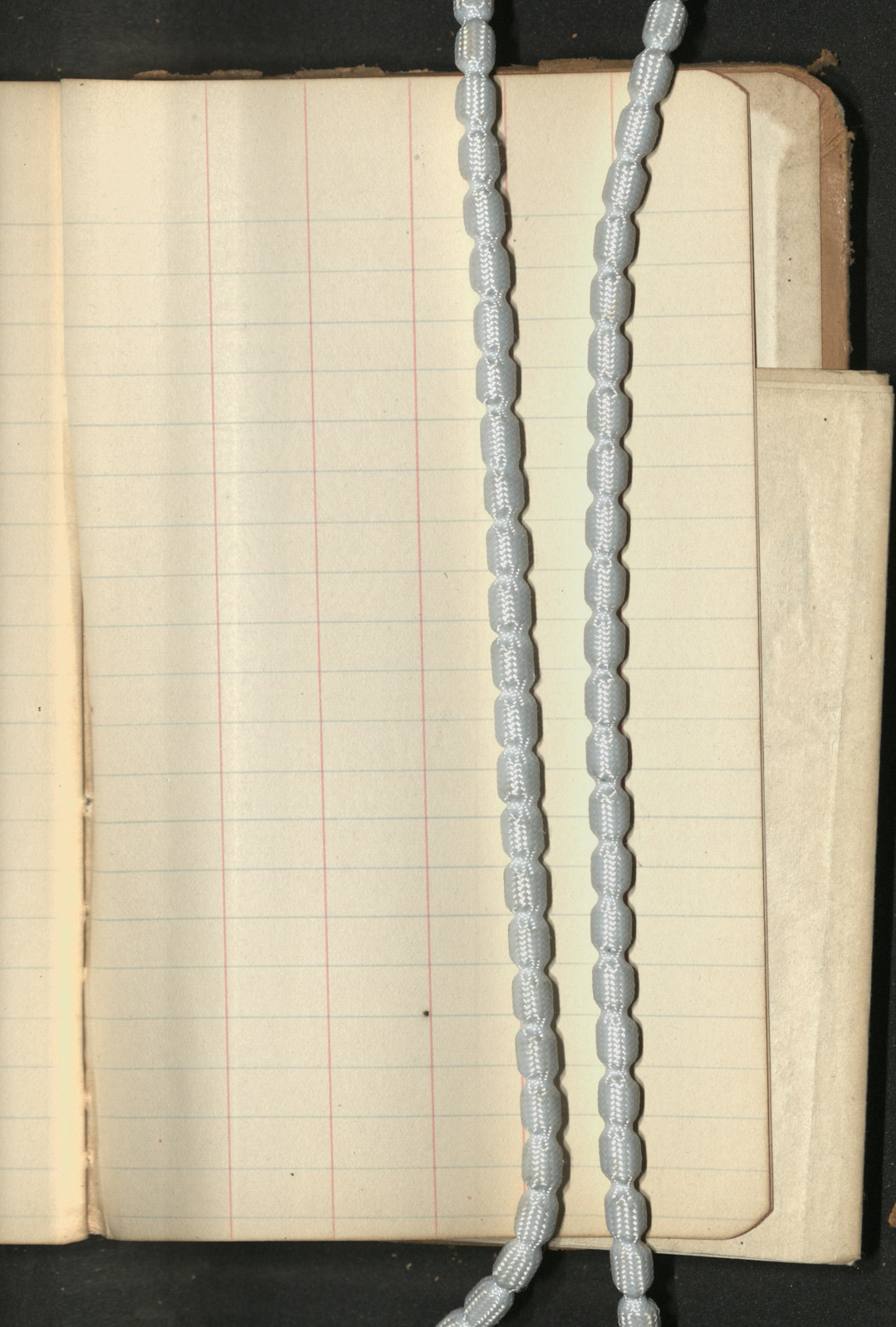


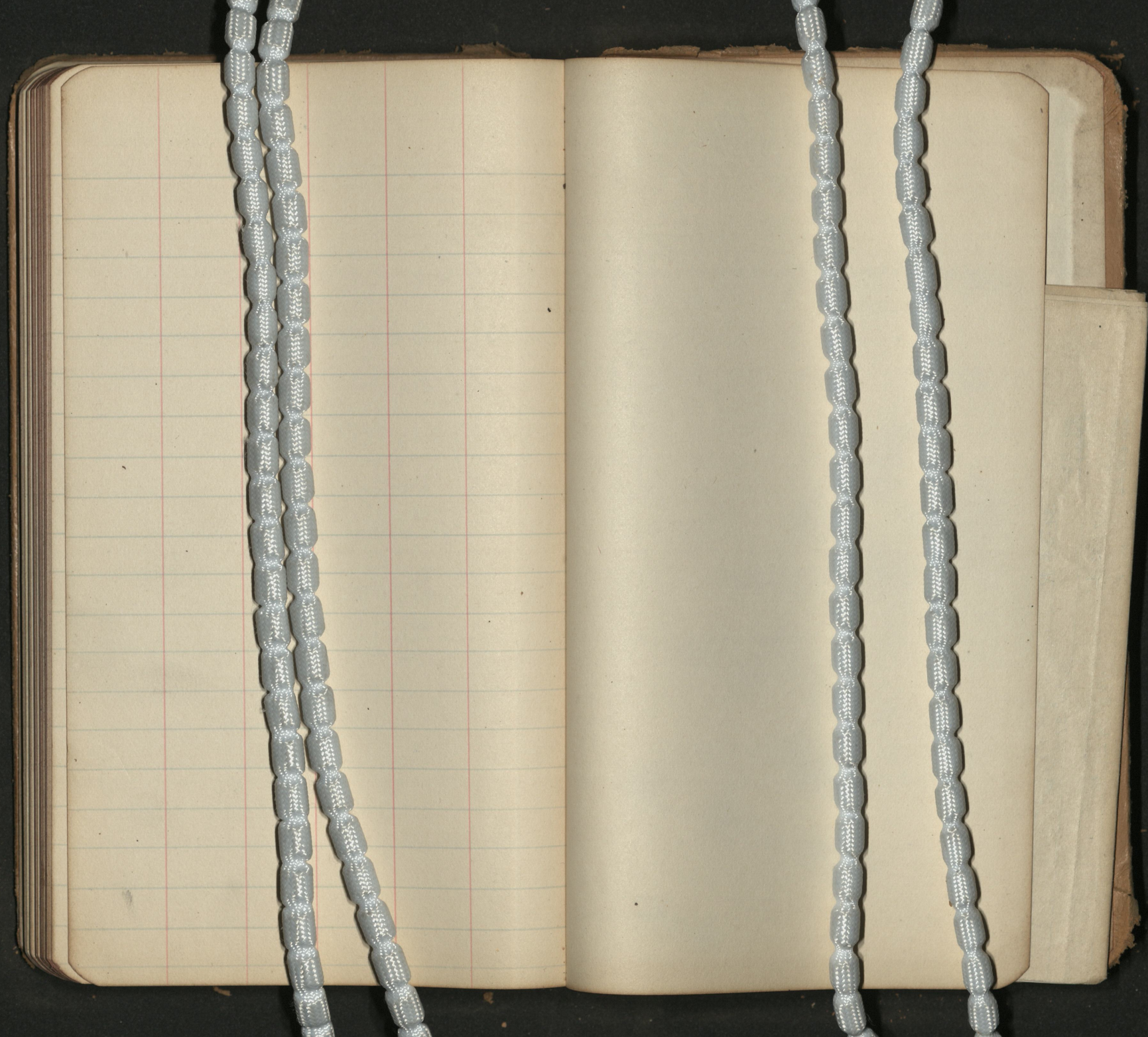












338 66
916 90
21860 41
20960
9100



34 W

2+28 L

3 0° 54 E

17.38

S 18° 32 E

15° R

S 3° 32 E

38 10 R L

~~S 34 38 W~~

S 41° 42 E

67° 28 R

S 25° 46 W

43° 26 L

S 17° 40 E

16-12 R

S 1° 28 E

140.45

213.81

147.00

501.26

213.81

148.12

332.30

694.23

148.12

127.84

96.60

372.56

127.84

235.67

71.50

435.01

235.67

260.17

40.00

535.84

260.17

185.87

15.70

461.74

185.87

114.42

91.50

391.79

64+04.4

62+57.4

147.0

21+48.5

68.165

3323

25 893

24 427

965

60.8

89.3

71.5

57.2

17.2

40.0

80.8

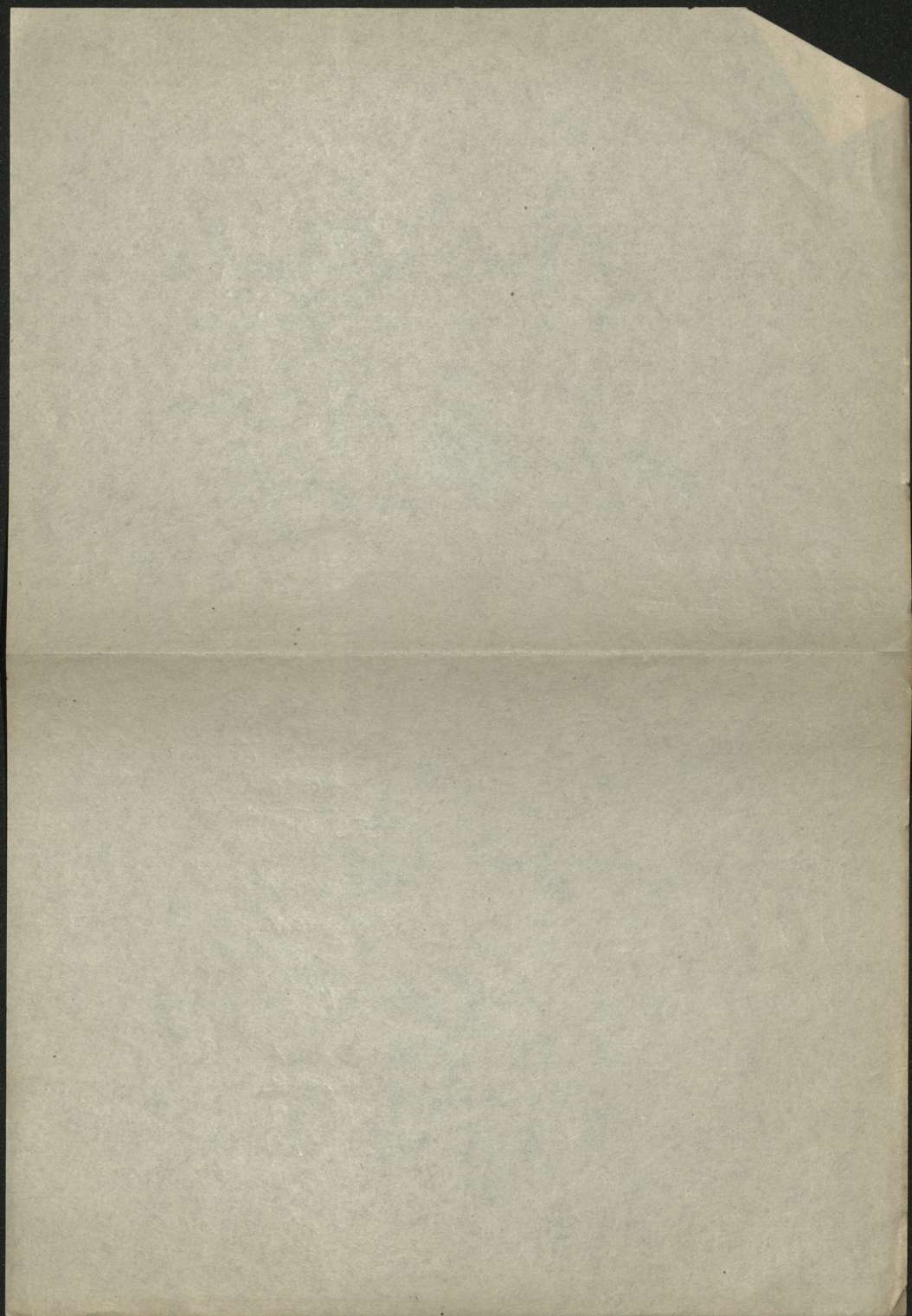
65.1

15.7

30

38.0

91.5



16-4-2

284.1	North East	
668.24	73° 26' R	N 73° 0' E S 16° 34' E ✓
11165.3	67° 34' R	S 39° 00' E S 51° 00' W ✓
18-5742	77° 34' L	N 53° 20' E S 26° 34' E ✓
871.21	73° 45' R	S 42° 46' E S 47° 14' W ✓
1407.36	15° 36' R	S 27° 10' E S 62° 50' W ✓
11972.52	32° 14' L	S 65° 14' E S 30° 30' W ✓
2058.29	38° 50' L	N 71° 46' E S 8° 14' E ✓
737.04	45° 15' R	S 62° 56' E S 37° 04' W ✓
849.76	51° 20' L	N 65° 34' E S 14° 26' E ✓
795.22	35° 16' R	S 79° 08' E S 20° 52' W ✓
858.67	33° 50' L	N 67° 02' E S 12° 58' E ✓
1133.77	22° 22' R	N 89° 24' E S 9° 24' W ✓
2142.33	43° 24' L	N 46° 50' E S 34° 00' E ✓
579.51	19° 18' R	N 65° 18' E S 14° 42' E ✓
1046.67	62° 44' L	97° 48' L N 67° 30' E N 77° 30' E
613.05	12° 00' R	N 17° 30' W N 82° 30' E ✓ N 89° 30' E
619.38	25° 26' R	N 05° 30' W S 85° 30' E ✓ S 65° 04' E
484.46	27° 10' L	N 19° 56' E S 60° 04' E ✓ N 72° 46' E
1161.19	113° 24' R	N 7° 14' W S 87° 14' E ✓ S 21° 10' W
910.18	25° 15' L	S 73° 50' E S 26° 10' W ✓ S 4° 05' E
432.84	16° 42' R	S 82° 10' E S 0° 55' W X S 12° 37' W
486.28		S 88° 23' E S 17° 37' W

$$\begin{array}{r} 21 + 24.5 \\ \hline 15709.1 \\ 6648 \end{array}$$

$$\begin{array}{r} 27 + 92.7 \\ \hline 22 + 49 \end{array}$$

$$\begin{array}{r} 743.7 \end{array}$$

$$\begin{array}{r} 29.922 \\ \hline 20846 \\ 908.2 \end{array}$$

S 12° 37' W

75° L

S 62° 23' E

65-10 R

S 3° 13' W

19-38 L

S 16° 25' E

9-26 R

S 65° 9' E

20-09 R

S 13° 10' W

42° 51' R

S 56° 01' W

19-28 L

S 36° 33' W

10-36 R

S 47° 09' W

49° 54' R

97.03

N 82° 57' W

22

23

24

25

26

27

28

29

30

105.12
318.44
84.48
302.96

318.44
382.97
47.10
748.61

382.97
123.92
616.70
1123.59

123.93
118.19
156.10
398.22

127.27
183.76
223.60
534.63

183.76
122.86
92.60
399.22

122.86
132.89
104.00
359.75

132.89
245.30
452.70
830.89

78 530
77 691
84.1

17+63.5
11+46.7
616.7

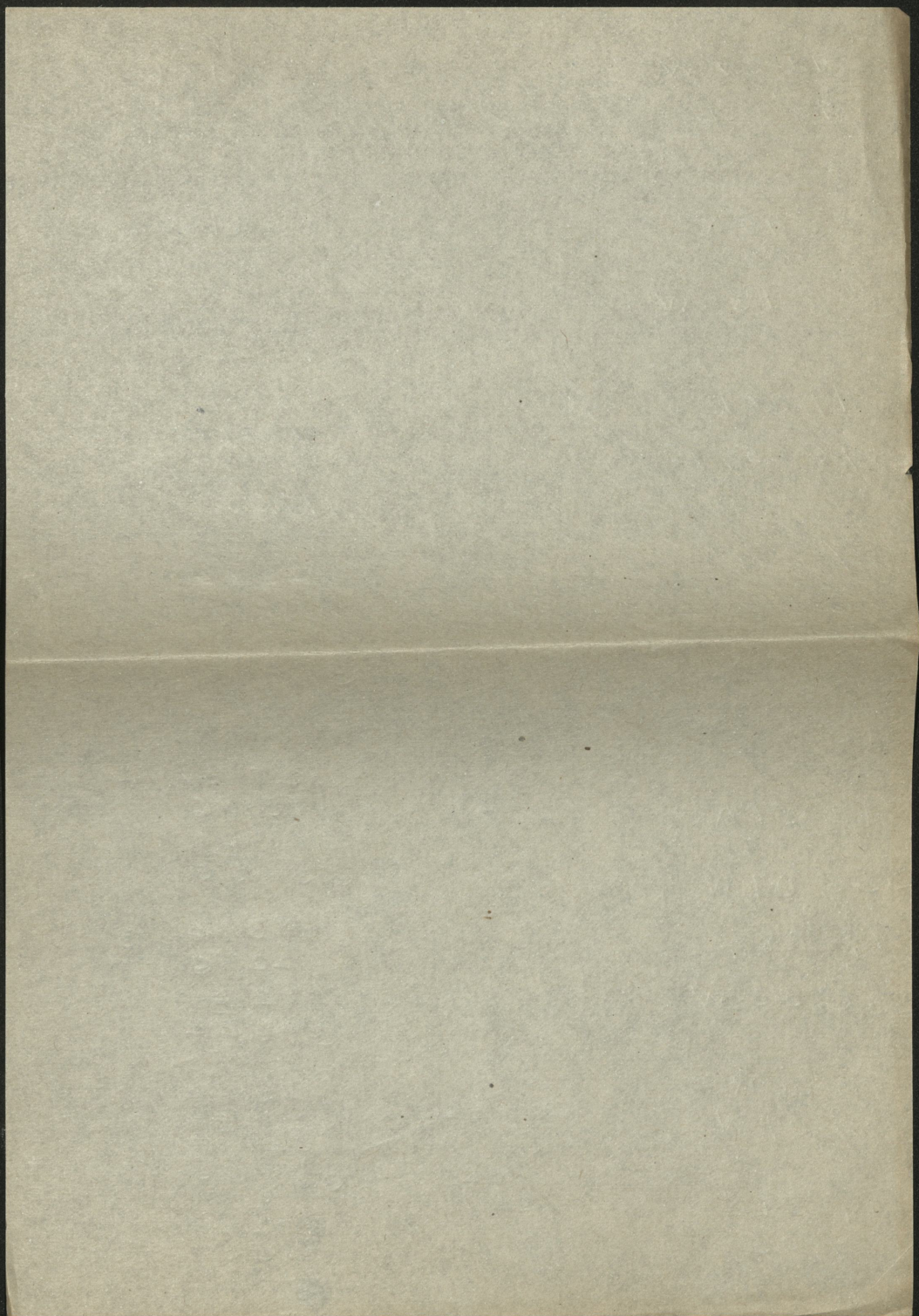
21+65.1
20+09
156.1

38+76.2
24+62.6
223.6

38+22.5
32+30.2
95.2

6+70.1
6+65.1
7+04.0

43 878
39+351
4527



577.08 W
90
S 12.58 E

S 47.20 E

547.20 E

52.07

99.57

N 86.03 E

39.

220.39

28.5

566.30

815.19

16123.6
12.08 4
416.1

1084
1087
141.8

111.05

40

191.08

S 112.06 N

3842R

S 44.50 W

41

566.30

135.49

370.30

1072.09

135.49

864.42

11.80

1011.71

28.02.8
24132.6
370.3

136.25 L

42

9135

180

N 88.25 E

4941R

43

138.06

180

S 41.54 E

19.28R

S 22.26 E

5248

44

45

864.42

209.10

24.7

1098.22

209.10

163.81

114.30

487.21

44927
43.78
1143

50170
48168
200.7

S 30°22 W

11.12

S 41.34 W

46

163.80

283.28

200.70

647.78

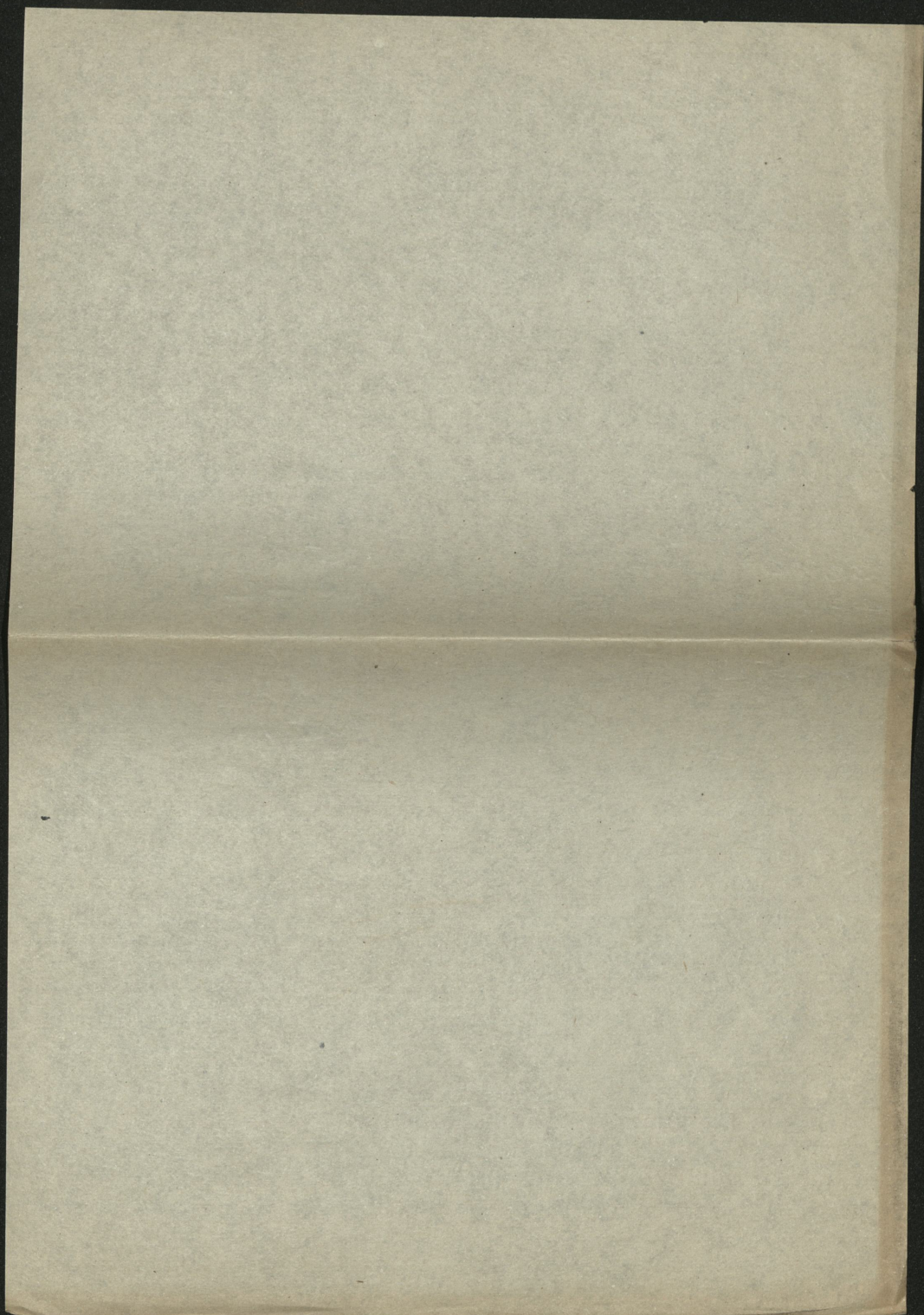
283.28

140.45

427.90

851.63

59777.4
55495
4279



$51^{\circ} 28' E$
 17.28

 $518.56 E$

114.42
 125.74
 137.80

 377.96

70.3
 32.5

 137.8

$13.30 R$
 $55.26 E$

55

125.74
 84.78
 508.20

 718.72

404.275
 399.193

 5082

20

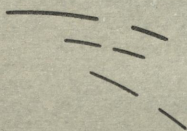
$525.26 E$

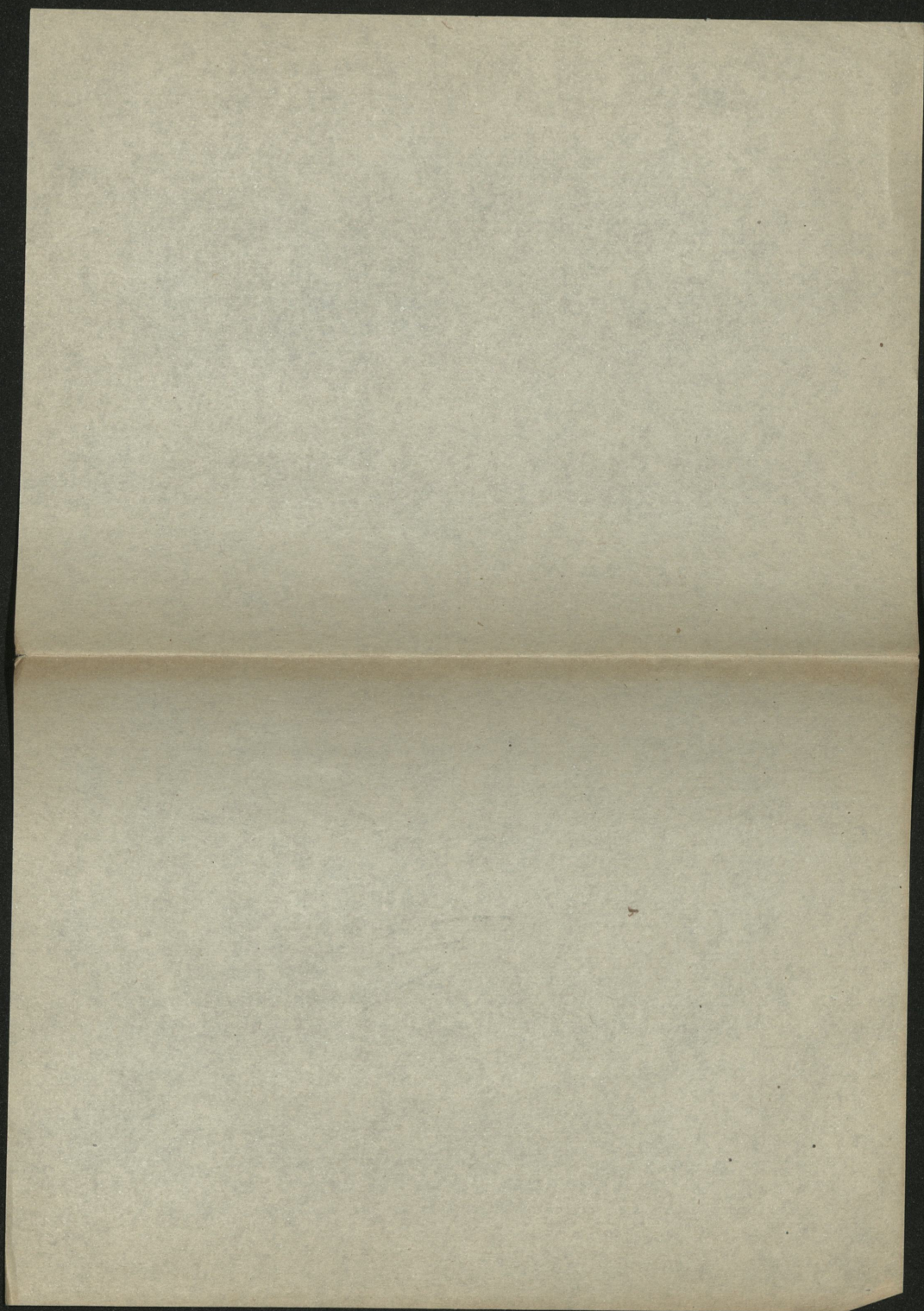
84.78
 63.15
 325.70

 473.63

409.22
 405.963

 3257





	16.42		047°37' W ✓
708.52	60°00' L ✓		042°23' E ✓
1105.29	53°10' R ✓		010°41' W ✓
398.22	19°38' L ✓		01°51' R ✓
245.46	9°26' R ✓		00°35' W ✓
529.47	20°09' R ✓		00°21' W ✓
594.26	21°51' R ✓		00°11' R ✓
359.75	19°28' L ✓		00°11' W ✓
822.29	10°22' R ✓		00°11' W ✓
490.55 1911.1	34°54' R ✓		00°11' W ✓
4951.4 4964.96	171°33' L ✓		014°37' W ✓
698.70	74°18' R ✓		N83°04' E ✓
526.84	15°30' L ✓		S12°38' E ✓
602.8	74°19' R ✓		S23°06' E ✓
615.18	32°57' L ✓		10°30'
1078.24	69°29' L ✓		13°
962.78	88°56' R ✓		3°31' E ✓
875.79	105°55' L ✓		025°10' W ✓
728.79	37°37' L ✓		080°12' E ✓
991.94	76°25' R ✓		N62°11' E ✓
760.22	24°22' R ✓		071°44' ✓
			32°38' W

